Search Results

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4. EMBASE, Medline; (TRICHOMONAS AND VAGINALIS).ti,ab; 8574 results.
5. EMBASE, Medline; CANDIDA.ti,ab; 109539 results.
6. EMBASE, Medline; (BACTERIAL AND VAGINOSIS).ti,ab; 7150 results.
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8. EMBASE, Medline; (SEXUALLY AND TRANSMITTED AND INFECTIONS).ti,ab; 22239 results.
9. EMBASE, Medline; CANDIDIASIS.ti,ab; 28057 results.
10. EMBASE, Medline; (VAGINAL AND SUPPOSITORIES).ti,ab; 1033 results.
11. EMBASE, Medline; 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10; 169242 results.
12. EMBASE, Medline; 1 AND 11; 173 results.
13. EMBASE,Medline; Duplicate filtered: [1 AND 11]; 173 results.

1. [Influence of boric acid on strains of the genus Candida].

Citation: Ceskoslovenská gynekologie, Jan 1949, vol. 14, no. 2, p. 97-100, 0374-6852 (1949)

Author(s): KOCKOVA-KRATOCHVILOVA, A

Subject Headings:
Boron Compounds
Candidiasis
Leadership
Boric Acids
Candida
Old Medline

Source: Medline

2. Boric acid treatment of vulvovaginal candidiasis.

Citation: Obstetrics and gynecology, Jun 1974, vol. 43, no. 6, p. 893-895, 0029-7844 (June 1974)

Author(s): Swate, T E; Weed, J C

Subject Headings:
Capsules
Candida albicans
Vaginal Smears
Candidiasis Vulvovaginal
Humans
Index Medicus
Recurrence
Female
Boric Acids
In Vitro Techniques
Abridged Index Medicus
Ointments

Source: Medline

3. Diaper dermatitis: current concepts.

Citation: Pediatrics, Oct 1980, vol. 66, no. 4, p. 532-536, 0031-4005 (October 1980)

Author(s): Weston, W L; Lane, A T; Weston, J A

Abstract: Diaper dermatitis may result from prolonged skin contact with wetness and bacteria. Ammonia plays no apparent role in the generation of diaper dermatitis. Candida albicans frequently contaminates a diaper dermatitis and should be considered present in any diaper dermatitis and should be considered present in any diaper dermatitis known to be present for longer than three days. Topical fluorinated glucocorteroids, boric acid, and mercury-containing preparations should be avoided in the diaper area because of their toxicity.

Subject Headings:
Blister
Infant
Diaper Rash
Humans
Candidiasis
Diagnosis Differential
Water
Bacterial Infections
Erythema
Infant Newborn
Abridged Index Medicus
Index Medicus
Ammonia

Source: Medline

4. Treatment of vulvovaginal candidiasis with boric acid powder.

Citation: American journal of obstetrics and gynecology, Sep 1981, vol. 141, no. 2, p. 145-148, 0002-9378 (September 15, 1981)

Author(s): Van Slyke, K K; Michel, V P; Rein, M F

Abstract: A double-blind comparison was made of the use of 14 daily intravaginal gelatin capsules containing 600 mg of boric acid powder versus the use of identical capsules containing 100,000 U nystatin diluted to volume with cornstarch for the treatment of vulvovaginal candidiasis albicans. Cure rates for boric acid were 92% at 7 to 10 days after treatment and 72% at 30 days, whereas the nystatin cure rates were 64% at 7 to 10 days and 50% at 30 days. The speed of alleviation of signs and symptoms was similar for the two drugs. There were no untoward side effects, and cervical cytologic features were not affected. In vitro studies found boric acid to be fungistatic and its effectiveness to be unrelated to pH. Blood boron analyses indicated little absorption from the vagina and a half-life of less than 12 hours. Acceptance by the patients was better than for "messy" vaginal creams, and self-made capsules containing boric acid powder are inexpensive (31 cents for fourteen) compared with the costly medication commonly prescribed.

Subject Headings:
Capsules
Candidiasis Vulvovaginal
Humans
Powders
Index Medicus
Nystatin
Adult
Female
Boron
Boric Acids
Suppositories
Double-Blind Method
Random Allocation
Abridged Index Medicus

Source: Medline

5. Current therapy of vulvovaginitis.

Citation: Sexually transmitted diseases, Oct 1981, vol. 8, no. 4 suppl, p. 316-320, 0148-5717 (1981 Oct-Dec)

Author(s): Rein, M F

Abstract: Trichomoniasis is reliably treated with a single 2-g dose of metronidazole; however, with this regimen simultaneous treatment of sexual partners is particularly important. Trichomoniasis in pregnant women, who should not receive metronidazole, might be treated initially with clotrimazole vaginal suppositories, which appear to cure about 50% of cases. Topical antifungal agents of the imidazole class are superior to polyenes in treating vulvovaginal candidiasis. Boric acid powder applied intravaginally in gelatin capsules for 14 days appears as effective as imidazoles. Nonspecific vaginitis is now recognized as involving infection with anaerobic bacteria of the vaginal flora as well as Gardnerella vaginalis. The condition is most successfully treated with a seven-day course of metronidazole, which probably acts by eradicating the anaerobes. In addition, metabolites of metronidazole may act directly on G. vaginalis. Sulfanilamide-aminacrine-allantoin preparations are much less effective than specific therapies and have no role in the treatment of vulvovaginitis.

Subject Headings:
Vaginitis
Male
Clotrimazole
Humans
Antifungal Agents
Candidiasis

Vulvovaginitis
Index Medicus
Metronidazole
Bacterial Infections
Female
Boric Acids
Imidazoles
Trichomonas Vaginitis
Pregnancy

Source: Medline

6. Torulopsis glabrata vaginitis: clinical aspects and susceptibility to antifungal agents.

Citation: Obstetrics and gynecology, Oct 1990, vol. 76, no. 4, p. 651-655, 0029-7844 (October 1990)

Author(s): Redondo-Lopez, V; Lynch, M; Schmitt, C; Cook, R; Sobel, J D

Abstract: Torulopsis glabrata is second only to Candida albicans in frequency of isolation from the vagina in both asymptomatic women and patients with yeast vaginitis. We retrospectively studied 33 patients from whom vaginal isolates of T glabrata were obtained. Torulopsis glabrata caused symptomatic vaginitis in 42% of the patients but was unassociated with symptoms in 30%; in 27% of patients, its importance was uncertain because of concomitant pathology. Antifungal susceptibility testing was performed on 39 T glabrata strains isolated from 39 patients. The minimal inhibitory concentrations (MICs) of the majority of T glabrata isolates fell within the sensitive range of the antimycotic drugs tested; however, no correlation was found between in vitro antifungal MICs and the response to azole drug therapy. Clinical success was achieved in 67% of the patients although mycologic cure occurred in only 33%. A small number of patients developed recurrent and often chronic Torulopsis vaginitis unresponsive to conventional therapy. Limited experience suggests that vaginal boric acid therapy may be of value in these recalcitrant cases.

Subject Headings: Antifungal Agents
Candidiasis Vulvovaginal
Humans
Index Medicus
Recurrence
Adult
Female
Middle Aged
Candida
Abridged Index Medicus
Microbial Sensitivity Tests

Source: Medline

7. Management of persistent vulvo vaginal candidosis due to azole-resistant Candida glabrata.

Citation: Genitourinary medicine, Apr 1993, vol. 69, no. 2, p. 112-114, 0266-4348 (April 1993)

Author(s): White, D J; Johnson, E M; Warnock, D W

Abstract: CASE REPORT--SUBJECTS--Three cases are described of long-standing vaginal candidosis due to Candida glabrata. These had failed to respond to local and systemic antifungals. In each case the infecting strain appeared resistant to a range of azole drugs in vitro. CLINICAL COURSE--Case one--This patient recovered following prolonged treatment with oral itraconazole in combination with oral and vaginal nystatin. Case two. Yeasts were eradicated from this patient following cyclical treatment with oral dydrogesterone; prolonged vaginal treatment with nystatin may have helped. Case three. This patient did not respond to a prolonged course of oral itraconazole in combination with vaginal and oral nystatin, oral medroxyprogesterone or intravaginal boric acid. Eradication of C glabrata was finally achieved by local application of 1% gentian violet.

Shortly after eradication of the C glabrata infection, both Case two and Case three developed infections with other Candida species responsive to azole antifungals.

Subject Headings:
Medroxyprogesterone Acetate
Itraconazole
Ketoconazole
Humans
Administration Oral
Candidiasis Vulvovaginal
Antifungal Agents
Administration Topical
Nystatin
Gentian Violet
Adult
Female
Fluconazole
Drug Resistance Microbial
Index Medicus
Microbial Sensitivity Tests
Econazole

Source: Medline

Full Text: Available from *National Library of Medicine* in *Genitourinary Medicine*

8. Boric acid vaginal suppositories.

Citation: The Annals of pharmacotherapy, Nov 1993, vol. 27, no. 11, p. 1355-1357, 1060-0280 (November 1993)

Author(s): Thai, L; Hart, L L

Subject Headings:
Candidiasis Vulvovaginal
Humans
Pessaries
Clinical Trials as Topic
Adult
Female
Boric Acids
Index Medicus

Source: Medline

9. Biotypes of oral Candida albicans isolates in human immunodeficiency virus-infected patients from diverse geographic locations.

Citation: Journal of oral pathology & medicine : official publication of the International Association of Oral Pathologists and the American Academy of Oral Pathology, Jan 1995, vol. 24, no. 1, p. 32-36, 0904-2512 (January 1995)

Author(s): Tsang, P C; Samaranayake, L P; Philipsen, H P; McCulloug, M; Reichart, P A; Schmidt-Westhausen, A; Scully, C; Porter, S R

Abstract: Oral Candida albicans isolates from HIV-infected individuals in Hong Kong, Australia, Germany and England were characterised using a biotyping system based on enzyme profiles, carbohydrate assimilation patterns and boric acid resistance of the yeasts. A total of 44 biotypes were found amongst the 117 oral C. albicans isolates examined. The major biotype A1R accounted for 17.9% of all isolates while the second commonest biotype was A1S (11.1% of isolates). Whereas these two biotypes were isolated from all the regions studied, there were a number of other biotypes unique to individual countries. The data indicate that there are many different sub-strains of oral C. albicans in HIV-infected patients, some of which are globally prevalent. However, further work is required to ascertain the diversity of oral C. albicans biotypes, if any, in health and disease.

Subject Headings:
Australia
England

"AIDS/HIV"
Candida albicans
Candidiasis Oral
Humans
Index Medicus
Germany
Dentistry
Mycological Typing Techniques
Population
Hong Kong
AIDS-Related Opportunistic Infections

Source: Medline

10. Oral Candida albicans biotypes in Chinese patients with and without oral candidosis.

Citation: Archives of oral biology, Jun 1995, vol. 40, no. 6, p. 577-579, 0003-9969 (June 1995)

Author(s): Xu, Y Y; Samaranayake, L P

Abstract: A total of 53 oral Candida albicans isolates from Chinese patients with clinically diagnosed oral candidosis (27 patients) or without overt signs and mycological manifestations of infection (26) were biotyped using two commercially available API micromethod kits and a boric acid-resistance test. There were no significant differences in the biotypes in health and disease, although the biotype A1R was present only in diseased individuals. The biotype A1S accounted for 21% of the total isolates, as in a number of other previous studies from the West. However, 14 of the 27 biotypes characterized were new biotypes that have not been described before. These preliminary data indicate that biotypic profile of C. albicans may bear no relation to the virulence of the isolates, and that diverse subtypes of the fungus are globally prevalent.

Subject Headings:
Candida albicans
Virulence
Candidiasis Oral
Humans
Colony Count Microbial
Index Medicus
China
Dentistry
Boric Acids
Drug Resistance Microbial
Mycological Typing Techniques
Mouth
Tongue
Carrier State

Source: Medline

11. Chronic fungal vaginitis: the value of cultures.

Citation: American journal of obstetrics and gynecology, Sep 1995, vol. 173, no. 3 Pt 1, p. 820-823, 0002-9378 (September 1995)

Author(s): Nyirjesy, P; Seeney, S M; Grody, M H; Jordan, C A; Buckley, H R

Abstract: Our purpose was to examine the importance of fungal cultures in evaluating patients with symptoms of chronic vaginitis by assessing the relative contribution of various yeast species and by comparing infections caused by Candida albicans with those caused by other species. A prospective observational study of patients referred with chronic vaginal symptoms was undertaken. In addition to a standard evaluation of symptoms, cultures for yeast were performed on modified Sabouraud agar plates. Seventy-seven isolates were obtained from 74 patients. A total of 68% were Candida albicans; 32% were other species. The clinical syndromes caused by non-Candida albicans isolates were indistinguishable from Candida albicans infections. Fluconazole gave a short-term mycologic cure in all Candida albicans but only 25% of non-Candida albicans cases (p <

0.001). In non-Candida albicans infections, boric acid suppositories achieved the best mycologic cure rate (85%). Because non-Candida albicans species are responsible for a significant number of chronic fungal vaginal infections and are more resistant to therapy with fluconazole, fungal cultures are a valuable aid in confirming the diagnosis and selecting appropriate therapy.

Subject Headings:
Prospective Studies
Candida albicans
Candidiasis Vulvovaginal
Humans
Index Medicus
Recurrence
Female
Fluconazole
Candida
Abridged Index Medicus
Saccharomyces cerevisiae
Chronic Disease

Source: Medline

12. Treatment of Torulopsis glabrata vaginitis: retrospective review of boric acid therapy.

Citation: Clinical infectious diseases : an official publication of the Infectious Diseases Society of America, Apr 1997, vol. 24, no. 4, p. 649-652, 1058-4838 (April 1997)

Author(s): Sobel, J D; Chaim, W

Abstract: The charts of all patients who were seen at a vaginitis clinic between January 1989 and December 1994 were retrospectively reviewed; 80 patients whose vaginal cultures yielded Torulopsis glabrata were identified. Sixty of these patients experienced 75 symptomatic episodes of vaginitis attributed to T. glabrata, and these patients are the subject of this review. Of the 60 symptomatic patients, 40 had uncomplicated T. glabrata infection, and 20 had mixed infection, most commonly in association with bacterial vaginosis. Evaluation of treatment of T. glabrata vaginitis with vaginal boric acid (600 mg/d for 14 days) revealed clinical improvement or cure in 21 (81%) of 26 episodes and mycological eradication in 20 (77%) of 26 episodes. One-third of the patients received maintenance therapy with boric acid. The clinical response and mycological eradication rates associated with therapy with topical and systemic azoles were <50%. The rate of therapeutic response to boric acid administered to patients with mixed T. glabrata infection remained high. In conclusion, in this series of patients with T. glabrata vaginitis, for whom repeated courses of antimycotic therapy with azoles had previously failed, boric acid emerged as a promising modality of therapy.

Subject Headings:
Vaginitis
Humans
Antifungal Agents
Candidiasis
Retrospective Studies
Female
Treatment Outcome
Boric Acids
Candida
Index Medicus
Follow-Up Studies

Source: Medline

Full Text: Available from *UHB Online* in *Clinical Infectious Diseases*; Note: ; Notes: Click on 'Sign in via OpenAthens' and enter login credentials

13. Successful use of boric acid to control azole-refractory Candida vaginitis in a woman with AIDS.

Citation: Journal of acquired immune deficiency syndromes and human retrovirology : official publication of the International Retrovirology Association, Nov 1997, vol. 16, no. 3, p. 219-220, 1077-9450 (November 1, 1997)

Author(s): Shinohara, Y T; Tasker, S A

Subject Headings:
"AIDS/HIV"
Administration Intravaginal
Humans
Candidiasis Vulvovaginal
Antifungal Agents
Index Medicus
Adult
Female
Fluconazole
Boric Acids
Drug Resistance Microbial
Suppositories
Acquired Immunodeficiency Syndrome

Source: Medline

14. Susceptibility of Candida species isolated from female prostitutes with vulvovaginitis to antifungal agents and boric acid.

Citation: European journal of clinical microbiology & infectious diseases : official publication of the European Society of Clinical Microbiology, Jan 1999, vol. 18, no. 1, p. 59-61, 0934-9723 (January 1999)

Author(s): Otero, L; Fleites, A; Méndez, F J; Palacio, V; Vázquez, F

Abstract: The aim of this study was to determine the antifungal susceptibility of 108 Candida albicans and 23 Candida glabrata isolates obtained from female prostitutes with vulvovaginitis, a population for which available data is limited. Amphotericin B, flucytosine, and fluconazole were tested by broth microdilution, and boric acid was tested by the agar dilution method. The susceptibility patterns found in this population were the same as those in the general population. Candida glabrata required greater concentrations of boric acid for inhibition in vitro than did Candida albicans.

Subject Headings:
Humans
Candidiasis Vulvovaginal
Antifungal Agents
Prostitution
Index Medicus
Female
Drug Resistance Microbial
Boric Acids
Candida
Microbial Sensitivity Tests

Source: Medline

Full Text: Available from *UHB Online* in *European Journal of Clinical Microbiology and Infectious Diseases*
Available from *ProQuest* in *European Journal of Clinical Microbiology and Infectious Diseases*

15. Terconazole cream for non-Candida albicans fungal vaginitis: results of a retrospective analysis.

Citation: Infectious diseases in obstetrics and gynecology, Jan 2000, vol. 8, no. 5-6, p. 240-243, 1064-7449 (2000)

Author(s): Sood, G; Nyirjesy, P; Weitz, M V; Chatwani, A

Abstract: Although it is FDA-approved for use in vulvovaginal candidiasis caused by non-Candida albicans species, terconazole cream has not been been studied in patients with these

infections. We sought to assess the clinical and mycological efficacy of terconazole cream in women with non-C. albicans vaginitis. The records of patients who had received a 7-day course of terconazole cream for culture-proved non-C. albicans vaginitis were reviewed. Data with regard to patient demographics, clinical and mycologic response to therapy within 1 month of treatment, and outcome with other antifungal therapies were analyzed. Twenty-eight patients received terconazole cream for non-C. albicans infections. Three patients did not return for follow-up. The median age was 45 years. Seven (28%) patients were nulliparous. The median duration of symptoms was 3 years. Nine patients (36%) had received terconazole within the 6 months prior to referral. Overall, there were 20 C. glabrata cases, 3 C. parapsilosis, and 2 C. lusitaniae. Fourteen (56%) patients achieved a mycologic cure; 11 (44%) noted a resolution of their symptoms. Prior terconazole use was not associated with treatment failure (P = 0.09). Ten failures received boric acid suppositories as subsequent treatment; a cure was effected in 4 (40%). Two of three patients (67%) were eventually cured with flucytosine cream. Five (20 %) patients remained uncured. Terconazole cream may be an appropriate first-line treatment for non C. albicans vaginitis, even in patients who have previously received the drug.

Subject Headings:

Antifungal Agents
Humans
Candidiasis Vulvovaginal
Flucytosine
Vaginal Creams Foams and Jellies
Index Medicus
Female
Middle Aged
Boric Acids
Treatment Outcome
Triazoles
Retrospective Studies

Source: Medline

Full Text: Available from *National Library of Medicine* in *Infectious Diseases in Obstetrics and Gynecology*

16. Phenotypic characterisation of Candida albicans isolated from chronic hyperplastic candidosis.

Citation: Journal of medical microbiology, Feb 2000, vol. 49, no. 2, p. 199-202, 0022-2615 (February 2000)

Author(s): Williams, D W; Wilson, M J; Potts, A J; Lewis, M A

Abstract: The phenotypes of 35 Candida albicans isolates from 19 patients with chronic hyperplastic candidosis (CHC) and 35 isolates from 30 patients with non-CHC infections were compared. Typing was based on carbohydrate assimilation, chemical sensitivity and serology. Eight carbohydrate assimilation profiles were evident with the API-20C system and a single profile predominated for isolates from CHC (17 of 19 patients; 89%) and non-CHC (18 of 30 patients; 63%). Chemical sensitivity tests revealed four profiles with no significant difference between CHC and non-CHC isolates. Serotype A predominated for isolates from both CHC (15 of 19 patients; 79%) and non-CHC (25 of 30 patients; 83%) infections. Boric acid resistance was more prevalent in CHC isolates, although a significant difference was not apparent. In summary, there was no overall difference in the phenotypes of isolates from CHC and non-CHC patients, and clonal restriction of CHC isolates was not demonstrated.

Subject Headings:

Hyperplasia
Candida albicans
Candidiasis Oral
Humans
Index Medicus
Serotyping
Mouth
Phenotype

Mycological Typing Techniques
Chronic Disease

Source: Medline

17. Biotypes of oral Candida albicans isolated from AIDS patients and HIV-free subjects in Thailand.

Citation: Journal of oral pathology & medicine : official publication of the International Association of Oral Pathologists and the American Academy of Oral Pathology, May 2000, vol. 29, no. 5, p. 193-199, 0904-2512 (May 2000)

Author(s): Teanpaisan, R; Nittayananta, W; Chongsuvivatwong, V

Abstract: This study was conducted to examine biotypes and antifungal susceptibility patterns of oral Candida albicans isolated from HIV-infected patients, HIV-free patients with candidiasis and healthy subjects. All isolates were biotyped using a typing system based on enzyme profiles, carbohydrate assimilation patterns and boric acid resistance. Thirty-eight biotypes were found amongst 218 oral C. albicans isolates. The major biotype found was A1S, which accounted for 32.6% of all isolates, and this biotype was the most common in all groups. There was a greater variety of biotypes of C. albicans in the HIV-infected group than in the other groups; however, there was no statistically significant difference between the groups. The minimum inhibitory concentrations (MICs) of a total of 118 isolates were determined for amphotericin B and for ketoconazole using the National Committee for Clinical Laboratory Standards (NCCLS) broth macrodilution method and the E-test. When the antifungal susceptibility patterns among the groups were compared, a statistically significant difference was found only with amphotericin B. The median MIC of amphotericin B in the HIV-infected group was higher than in the healthy group (P=0.013, NCCLS method; P=0.002, E-test). However, this difference in sensitivity was not restricted to any sub-type investigated. Our results showed that the biotype patterns of C. albicans isolates that colonize HIV-infected patients are similar to those of HIV-free subjects, and there is no relationship between antifungal susceptibility patterns and the biotypes.

Subject Headings:
HIV Seronegativity
Dentistry
"AIDS/HIV"
Candida albicans
Saliva
Candidiasis Oral
Humans
Index Medicus
Ketoconazole
Dose-Response Relationship Drug
Mycological Typing Techniques
Amphotericin B
Microbial Sensitivity Tests
AIDS-Related Opportunistic Infections

Source: Medline

18. Candida albicans strain differentiation in complete denture wearers.

Citation: The new microbiologica, Jul 2000, vol. 23, no. 3, p. 329-337, 1121-7138 (July 2000)

Author(s): Abu-Elteen, K H

Abstract: Strain differentiation of 66 clinical isolates of Candida albicans obtained from healthy dentate and complete denture wearers was performed. Resistogram method based on differences in the resistance of C. albicans isolates to sodium selenite, boric acid, cetrimide, sodium periodate and silver nitrate was used for strain differentiation. Of the 32 potential strains that can be distinguished, 14 different resistogram strains of C. albicans were found among the 66 isolates tested. Strain-C--was the most predominant (24.3% of total isolates), while strain A-CDE was the least predominant (1.5%). The results showed no particular association of certain strains with Candida infections in complete denture wearers. Sensitivity to antifungal agents showed that isolates from

different strains were most sensitive to amphotericin B and nystatin and least sensitive to miconazole.

Subject Headings:
Miconazole
Periodic Acid
Silver Nitrate
Candida albicans
Humans
Candidiasis Oral
Antifungal Agents
Index Medicus
Nystatin
Cetrimonium Compounds
Denture Complete
Amphotericin B
Boric Acids
Drug Resistance Microbial
Microbial Sensitivity Tests
Stomatitis Denture
Sodium Selenite

Source: Medline

19. Candida lusitaniae as an unusual cause of recurrent vaginitis and its successful treatment with intravaginal boric acid.

Citation: Infectious diseases in obstetrics and gynecology, Jan 2001, vol. 9, no. 4, p. 245-247, 1064-7449 (2001)

Author(s): Silverman, N S; Morgan, M; Nichols, W S

Abstract: Increasing use of short-course antifungal therapies in patients with recurrent vulvovaginitis may enable the emergence of less-common, more resistant yeast strains as vaginal pathogens. We report the case of a patient with chronically symptomatic and repeatedly treated vaginal candidiasis whose infection was attributable to Candida lusitaniae, a previously unreported cause of candidal vaginitis.

Subject Headings:
Administration Intravaginal
Middle Aged
Candidiasis Vulvovaginal
Humans
Index Medicus
Female
Boric Acids
Candida

Source: Medline

Full Text: Available from *National Library of Medicine* in *Infectious Diseases in Obstetrics and Gynecology*

20. Boric acid susceptibility testing of non-C. albicans Candida and Saccharomyces cerevisiae: comparison of three methods.

Citation: Medical mycology, Jun 2002, vol. 40, no. 3, p. 319-322, 1369-3786 (June 2002)

Author(s): Otero, L; Palacio, V; Mendez, F J; Vazquez, F

Abstract: To establish the best method for boric acid susceptibility testing, we compared two agar dilution methods (high and low inoculum) and a standard broth microdilution method (from the National Commitee for Clinical Laboratory Standards document NCCLS M-27A). Saccharomyces cerevisiae (37) and non-C. albicans Candida (39) isolates, as well as one isolate of Trichosporon sp., were included. All were isolated from female workers with vulvovaginitis. Good agreement within a fourfold dilution range was found between the three methods, and only the broth microdilution method versus the agar dilution method with high inoculum showed significant discrepancies. Reading results

was easier with the broth microdilution method than with the agar dilution methods because of partial growth inhibition in the latter. In conclusion, broth microdilution is a suitable method for testing yeast susceptibility to boric acid.

Subject Headings:
Trichosporon
Humans
Candidiasis Vulvovaginal
Antifungal Agents
Vulvovaginitis
Index Medicus
Agar
Anti-Infective Agents Local
Female
Boric Acids
Candida
Saccharomyces cerevisiae
Mycoses
Microbial Sensitivity Tests
Culture Media

Source: Medline

21. Vulvovaginal trichosporonosis.

Citation: Infectious diseases in obstetrics and gynecology, Jan 2003, vol. 11, no. 2, p. 131-133, 1064-7449 (2003)

Author(s): Makela, Paul; Leaman, Debbie; Sobel, Jack D

Abstract: Isolation of Trichosporon species from vaginal secretions is a rare event, and no data are available on its pathogenic role. A case series is presented to determine the pathogenic role of Trichosporon species in vulvovaginal infections. We performed a retrospective chart review of patients seen in the W.S.U. Vaginitis Clinic in order to identify patients from whom Trichosporon species were isolated. Between 1986 and 2001, a total of 13 patients had a total of 18 positive vaginal cultures for Trichosporon species. All 18 vaginal isolates were T. inkin. In general, positive vaginal cultures were accompanied by low yeast colony counts. Four out of 18 positive T. inkin cultures were obtained from visits by asymptomatic patients. Of the remaining 14 positive T. inkin cultures from patients with symptoms, nine out of 14 cultures had other diagnoses (Candida albicans, six cases; bacterial vaginosis, two cases; Trichomonas, one case). Five positive T. inkin cultures were obtained from visits at which patients had symptoms and no associated diagnosis. In only one of the five episodes could we establish a clear pathogenic role for Trichosporon. In this case the patient was treated with boric acid and had resolution of symptoms and a negative culture at follow-up. In-vitro susceptibility tests revealed that T. inkin was resistant to flucytosine and susceptible to all topical and oral azoles. T. inkin is occasionally found in vulvovaginal cultures and is usually a non-pathogen. Transient colonization tended to occur in women, usually of African-American origin, with major perturbations in vaginal flora (bacterial vaginosis and trichomoniasis) and increased pH. Pathogenic consequences of Trichosporon colonization appear to be rare.

Subject Headings:
Trichosporon
Hydrogen-Ion Concentration
Humans
Antifungal Agents
Vaginal Diseases
Colony Count Microbial
Index Medicus
Vagina
Adult
Female
Mycoses
Candida

African Americans
Retrospective Studies

Source: Medline

Full Text: Available from *National Library of Medicine* in *Infectious Diseases in Obstetrics and Gynecology*

22. Phenotypic diversity of oral C. albicans isolated on single and sequential visits in an HIV-infected Chinese cohort.

Citation: APMIS : acta pathologica, microbiologica, et immunologica Scandinavica, Feb 2003, vol. 111, no. 2, p. 329-337, 0903-4641 (February 2003)

Author(s): Samaranayake, Y H; Samaranayake, L P; Yau, J Y Y; Dassanayake, R S; Li, T K L; Anil, S

Abstract: HIV-infected individuals maintain multiple oral C. albicans strains over time that are thought to undergo microevolution in terms of both phenotypic and genotypic features. To study this phenomenon, a 12-month prospective study was conducted in a cohort of 16 HIV-infected ethnic Chinese individuals with (A) and without (B) symptoms of oropharyngeal candidiasis to evaluate the phenotype distribution among oral C. albicans isolates during disease progression. Oral rinse samples were obtained and up to five C. albicans colony-forming units were selected per each visit, during the one year period of multiple visits. The isolates were phenotyped using two commercially available biotyping kits, the API 20C system, API ZYM system, and a plate test for resistance to boric acid. A total of 261 C. albicans strains in group A were differentiated into 67 biotypes, while 42 biotypes were seen amongst the 182 isolates from group B. The major biotypes in the two groups were similar and were in decreasing order of prevalence J1R, J1S, J6S, J6R, J2S, K1S, J10R, K1R, and K6R; 48 different biotypes were seen in group A and 24 in group B, with some uniquely represented in each group, leading to a significant association between the prevalence of the biotypes J1S and J2S and symptomatic candidiasis ($p<0.05$). Taken together this study illustrates the wide phenotypic spectrum of oral C. albicans associated with HIV-infection.

Subject Headings:
Male
Genotype
Candida albicans
Humans
Cohort Studies
Candidiasis Oral
Disease Progression
Index Medicus
Sexuality
China
Adult
Female
Middle Aged
HIV Infections
Carrier State

Source: Medline

Full Text: Available from *EBSCOhost* in *APMIS*

23. Common complementary and alternative therapies for yeast vaginitis and bacterial vaginosis: a systematic review.

Citation: Obstetrical & gynecological survey, May 2003, vol. 58, no. 5, p. 351-358, 0029-7828 (May 2003)

Author(s): Van Kessel, Katherine; Assefi, Nassim; Marrazzo, Jeanne; Eckert, Linda

Abstract: This article is a systematic review of the literature regarding the most commonly used complementary and alternative medicine (CAM) therapies for yeast vaginitis and bacterial vaginosis. A search was conducted of all published literature on conventional search engines (PubMed, EMBASE, the Cochrane Registry, CINAHL, LILACS) and alternative medicine databases (Natural Medicines Comprehensive Database, Longwood

Herbal Taskforce, and Alternative Medicine Alert), for all studies of the five most commonly used CAM treatments of vaginitis. Inconsistencies in definition of vaginitis, type of intervention, control groups, and outcomes prevented performance of a meta-analysis, and paucity of high-quality studies made ranking by evidence-based scales unsuitable. Lactobacillus recolonization (via yogurt or capsules) shows promise for the treatment of both yeast vaginitis and bacterial vaginosis with little potential for harm. Boric acid can be recommended to women with recurrent vulvovaginal Candidal infections who are resistant to conventional therapies, but can occasionally cause vaginal burning. Because of associated risks in the absence of well-documented clinical benefits, douching remains a practice that should not be recommended for the treatment of vaginitis. Finally, tea tree oil and garlic show some in vitro potential for the treatment of vaginitis, but the lack of in vivo studies preclude their recommendation to patients for the time-being. The available evidence for CAM treatments of vaginitis is of poor quality despite the prevalent use of these therapies. Well-designed randomized, controlled trials investigating the efficacy and safety of these therapies for vaginitis are needed before any reliable clinical recommendations can be made. Obstetricians & Gynecologists, Family Physicians. After completion of this article, the reader will be able to list the most common complementary and alternative medicine therapies for vaginitis, summarize the data surrounding the efficacy of each therapy, describe the adverse affects of each therapy, and outline which therapies are recommended and not recommended for vaginitis.

Subject Headings:

Phytotherapy
Lactobacillus
Drug Resistance
Vaginitis
Yeasts
Humans
Candidiasis
Index Medicus
Recurrence
Therapeutic Irrigation
Anti-Infective Agents Local
Garlic
Female
Yogurt
Treatment Outcome
Tea Tree Oil
Vaginosis Bacterial
Complementary Therapies

Source: Medline

24. Treatment of vaginitis caused by Candida glabrata: use of topical boric acid and flucytosine.

Citation: American journal of obstetrics and gynecology, Nov 2003, vol. 189, no. 5, p. 1297-1300, 0002-9378 (November 2003)

Author(s): Sobel, Jack D; Chaim, Walter; Nagappan, Viji; Leaman, Deborah

Abstract: The purpose of this study was to review the treatment outcome and safety of topical therapy with boric acid and flucytosine in women with Candida glabrata vaginitis. This was a retrospective review of case records of 141 women with positive vaginal cultures of C glabrata at two sites, Wayne State University School of Medicine and Ben Gurion University. The boric acid regimen, 600 mg daily for 2 to 3 weeks, achieved clinical and mycologic success in 47 of 73 symptomatic women (64%) in Detroit and 27 of 38 symptomatic women (71%) in Beer Sheba. No advantage was observed in extending therapy for 14 to 21 days. Topical flucytosine cream administered nightly for 14 days was associated with a successful outcome in 27 of 30 of women (90%) whose condition had failed to respond to boric acid and azole therapy. Local side effects were uncommon with both regimens. Topical boric acid and flucytosine are useful additions to therapy for women with azole-refractory C glabrata vaginitis.

Subject Headings: Vaginitis

Index Medicus
Adolescent
Abridged Index Medicus
Flucytosine
Candidiasis Vulvovaginal
Antifungal Agents
Administration Topical
Humans
Adult
Female
Middle Aged
Boric Acids
Ointments
Aged
Candida glabrata
Retrospective Studies
Retreatment

Source: Medline

25. Biotypes and randomly amplified polymorphic DNA (RAPD) profiles of subgingival Candida albicans isolates in HIV infection.

Citation: The new microbiologica, Jan 2005, vol. 28, no. 1, p. 75-82, 1121-7138 (January 2005)

Author(s): Pizzo, Giuseppe; Giammanco, Giovanni M; Pecorella, Sonia; Campisi, Giuseppina; Mammina, Caterina; D'Angelo, Matteo

Abstract: A group of subgingival isolates of C. albicans recovered from Italian HIV-positive (HIV+) subjects were characterized both phenotypically and genotypically. Phenotyping of the isolates was carried out by a biotyping method based on the enzyme profiles, carbohydrate assimilation patterns and boric acid resistance of the yeasts. Genotyping was performed through randomly amplified polymorphic DNA (RAPD) analysis. Five biotypes were found among the 29 subgingival C. albicans strains examined. The predominant biotypes were A1R (55.17%), A1S (24.14%), and A2R (13.79%), while the biotypes A11R and A13R were represented by a single isolate each. RAPD profiles identified 15 genotypes among the 29 isolates. Almost every individual harboured his/her own specific isolate and in three out of the six subjects with multiple isolates (two to six each) more than one genotype (two to six) was found. The biotype distribution we found is consistent with previous reports on C. albicans isolates from other oral sources, whereas the resistance to boric acid was highly frequent in subgingival strains. RAPD analysis showed high genetic heterogeneity within subgingival isolates, also when isolates were phenotypically identical. These findings, obtained from HIV+ subjects living in Southern Italy, may be useful as baseline information on subgingival C. albicans colonization in the Mediterranean area.

Subject Headings: Gingival Diseases
Drug Resistance Fungal
Italy
Genotype
Candida albicans
Humans
Candidiasis Oral
Antifungal Agents
Index Medicus
Male
Adult
Female
Boric Acids
Random Amplified Polymorphic DNA Technique
Mycological Typing Techniques
DNA Fingerprinting
Phenotype

DNA Fungal
AIDS-Related Opportunistic Infections

Source: Medline

26. Biotypes and randomly amplified polymorphic DNA (RAPD) profiles of subgingival Candida albicans isolates in HIV infection

Citation: New Microbiologica, January 2005, vol./is. 28/1(75-82), 1121-7138 (January 2005)

Author(s): Pizzo G.; Giammanco G.M.; Pecorella S.; Campisi G.; Mammina C.; D'Angelo M.

Institution: (Pizzo, Pecorella, Campisi, D'Angelo) Department of Oral Sciences, University of Palermo, Italy; (Giammanco, Mammina) Dept. of Hygiene and Microbiology, University of Palermo, Italy; (Pizzo) Dipto. di Scienze Stomatologiche, Universita di Palermo, Via del Vespro 129, 90127 Palermo, Italy

Language: English

Abstract: A group of subgingival isolates of C. albicans recovered from Italian HIV-positive (HIV+) subjects were characterized both phenotypically and genotypically. Phenotyping of the isolates was carried out by a biotyping method based on the enzyme profiles, carbohydrate assimilation patterns and boric acid resistance of the yeasts. Genotyping was performed through randomly amplified polymorphic DNA (RAPD) analysis. Five biotypes were found among the 29 subgingival C. albicans strains examined. The predominant biotypes were A1R (55.17%), A1S (24.14%), and A2R (13.79%), while the biotypes A11R and A13R were represented by a single isolate each. RAPD profiles identified 15 genotypes among the 29 isolates. Almost every individual harboured his/her own specific isolate and in three out of the six subjects with multiple isolates (two to six each) more than one genotype (two to six) was found. The biotype distribution we found is consistent with previous reports on C. albicans isolates from other oral sources, whereas the resistance to boric acid was highly frequent in subgingival strains. RAPD analysis showed high genetic heterogeneity within subgingival isolates, also when isolates were phenotypically identical. These findings, obtained from HIV+ subjects living in Southern Italy, may be useful as baseline information on subgingival C. albicans colonization in the Mediterranean area.

Country of Publication: Italy

Publisher: Luigi Ponzio e figlio Editori

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid)

Publication Type: Journal: Article

Subject Headings:
adult
aged
article
biotype
*Candida albicans
clinical article
controlled study
female
fungal strain
fungus isolation
genetic heterogeneity
genotype
human
*Human immunodeficiency virus
"*Human immunodeficiency virus infection/et [Etiology]"
male
Mediterranean Sea
nonhuman
*periodontics
phenotype

*random amplified polymorphic DNA
yeast
boric acid
carbohydrate
enzyme

Source: EMBASE

27. In vitro activity of bergamot natural essence and furocoumarin-free and distilled extracts, and their associations with boric acid, against clinical yeast isolates

Citation: Journal of Antimicrobial Chemotherapy, January 2005, vol./is. 55/1(110-114), 0305-7453 (January 2005)

Author(s): Romano L.; Battaglia F.; Masucci L.; Sanguinetti M.; Posteraro B.; Plotti G.; Zanetti S.; Fadda G.

Institution: (Romano, Masucci, Sanguinetti, Posteraro, Fadda) Institute of Microbiology, Catholic Univ. of the Sacred Heart, Rome, Italy; (Battaglia, Plotti) Unit of Gynaecology and Obstetrics, Hospital of San Filippo Neri, Rome, Italy; (Zanetti) Department of Biomedical Sciences, University of Sassari, Sassari, Italy

Language: English

Abstract: Objectives: There is very little information, to date, on the antifungal activity of bergamot oil. In this study, we investigated the in vitro activity of three bergamot oils (natural essence, furocoumarin-free extract and distilled extract) against clinically relevant Candida species. We studied the two derivatives, components of Italian pharmaceutical products, that are supposed to be less toxic than the essential oil. Methods: In vitro susceptibility of 40 clinical isolates of Candida spp. (Candida albicans, n = 20; Candida glabrata, n = 13; Candida krusei, n = 4; Candida tropicalis, n = 2; Candida parapsilosis, n = 1), associated with symptomatic and asymptomatic vulvovaginal candidiasis, was determined using a modification of the NCCLS M27-A2 broth microdilution method. MICs were evaluated for each of the oils alone and combined with sub-inhibitory concentrations of the well-known antiseptic, boric acid. To boric acid, all isolates had MIC values ranging from 0.094% to 0.187% (w/v). Results: At 24 h readings, the MIC<inf>90</inf>s (for all isolates) were (v/v): 5% for natural essence of bergamot, 2.5% for the furocoumarin-free extract, and 1.25% for the distilled extract. At the 48 h reading, these values increased to >10%, 5% and 2.5%, respectively. At both readings, MIC<inf>90</inf>s for all oil + boric acid combinations were significantly lower than corresponding values for the oils alone ($P < 0.05$). Conclusions: These data indicate that bergamot oils are active in vitro against Candida spp., suggesting their potential role for the topical treatment of Candida infections. © The British Society for Antimicrobial Chemotherapy 2004; all rights reserved.

Country of Publication: United Kingdom

Publisher: Oxford University Press

CAS Registry Number: 8006-85-7 (bergamot oil); 8007-75-8 (bergamot oil); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 86386-73-4 (fluconazole)

Publication Type: Journal: Article

Subject Headings: antibiotic resistance
article
Candida albicans
Candida glabrata
candida krusei
Candida parapsilosis
Candida tropicalis
clinical article
distillation
female
fungus isolation
human

in vitro study
methodology
minimum inhibitory concentration
symptomatology
"*vagina candidiasis/et [Etiology]"
"*bergamot oil/cb [Drug Combination]"
"*bergamot oil/tp [Topical Drug Administration]"
"boric acid/cb [Drug Combination]"
fluconazole
"*furocoumarin/cb [Drug Combination]"
"*furocoumarin/tp [Topical Drug Administration]"

Source: EMBASE

28. In vitro activity of bergamot natural essence and furocoumarin-free and distilled extracts, and their associations with boric acid, against clinical yeast isolates.

Citation: The Journal of antimicrobial chemotherapy, Jan 2005, vol. 55, no. 1, p. 110-114, 0305-7453 (January 2005)

Author(s): Romano, L; Battaglia, F; Masucci, L; Sanguinetti, M; Posteraro, B; Plotti, G; Zanetti, S; Fadda, G

Abstract: There is very little information, to date, on the antifungal activity of bergamot oil. In this study, we investigated the in vitro activity of three bergamot oils (natural essence, furocoumarin-free extract and distilled extract) against clinically relevant Candida species. We studied the two derivatives, components of Italian pharmaceutical products, that are supposed to be less toxic than the essential oil. In vitro susceptibility of 40 clinical isolates of Candida spp. (Candida albicans, n=20; Candida glabrata, n=13; Candida krusei, n=4; Candida tropicalis, n=2; Candida parapsilosis, n=1), associated with symptomatic and asymptomatic vulvovaginal candidiasis, was determined using a modification of the NCCLS M27-A2 broth microdilution method. MICs were evaluated for each of the oils alone and combined with sub-inhibitory concentrations of the well-known antiseptic, boric acid. To boric acid, all isolates had MIC values ranging from 0.094% to 0.187% (w/v). At 24 h readings, the MIC(90)s (for all isolates) were (v/v): 5% for natural essence of bergamot, 2.5% for the furocoumarin-free extract, and 1.25% for the distilled extract. At the 48 h reading, these values increased to >10%, 5% and 2.5%, respectively. At both readings, MIC(90)s for all oil+boric acid combinations were significantly lower than corresponding values for the oils alone (P <0.05). These data indicate that bergamot oils are active in vitro against Candida spp., suggesting their potential role for the topical treatment of Candida infections.

Subject Headings:
Drug Interactions
Humans
Candidiasis Vulvovaginal
Antifungal Agents
Vagina
Plant Oils
Plant Extracts
Coumarins
Female
Boric Acids
Candida
Index Medicus
Microbial Sensitivity Tests

Source: Medline

29. Vaginal Candida parapsilosis: pathogen or bystander?

Citation: Infectious diseases in obstetrics and gynecology, Mar 2005, vol. 13, no. 1, p. 37-41, 1064-7449 (March 2005)

Author(s): Nyirjesy, Paul; Alexander, Alynn B; Weitz, M Velma

Abstract: Candida parapsilosis is an infrequent isolate on vaginal cultures; its role as a vaginal pathogen remains unstudied. This retrospective study of women with positive culture for C. parapsilosis sought to characterize the significance of this finding and its response to antifungal therapy. From February 2001 to August 2002, we identified all individuals with positive fungal isolates among a population of women with chronic vulvovaginal symptoms. Charts of women with C. parapsilosis cultures were reviewed with regard to patient demographics, clinical presentation and therapeutic response. Mycological cure, defined as a negative fungal culture at the next office visit, and clinical cure, i.e. symptom resolution, were determined for each subject. A total of 582 women had positive vaginal cultures for 635 isolates, of which 54 (8.5%) were C. parapsilosis. The charts of 51 subjects with C. parapsilosis were available for review and follow-up cultures and clinical information were available for 39 (76.5%). Microscopy was positive in 9 (17.6%). Antifungal treatment resulted in mycological cure in 17/19 patients with fluconazole, 7/7 with butoconazole, 6/6 with boric acid, 1/1 with miconazole and occurred spontaneously in 6/7: 24/37 (64.9%) patients with a mycological cure experienced clinical cure. Although C. parapsilosis is often a cause of vaginal symptoms, it seems to respond to a variety of antifungal agents and may even be a transient vaginal colonizer.

Subject Headings:
Vaginitis
Humans
Candidiasis Vulvovaginal
Antifungal Agents
Index Medicus
Aged 80 and over
Adult
Female
Middle Aged
Candida
Aged
Retrospective Studies

Source: Medline

Full Text: Available from *EBSCOhost* in *Infectious Diseases in Obstetrics & Gynecology*
Available from *ProQuest* in *Infectious Diseases in Obstetrics and Gynecology*
Available from *National Library of Medicine* in *Infectious Diseases in Obstetrics and Gynecology*

30. Vaginal Candida parapsilosis: Pathogen or bystander?

Citation: Infectious Disease in Obstetrics and Gynecology, March 2005, vol./is. 13/1(37-41), 1064-7449;1098-0997 (March 2005)

Author(s): Nyirjesy P.; Alexander A.B.; Weitz M.V.

Institution: (Nyirjesy, Weitz) Department of Obstetrics, Drexel University College of Medicine, Philadelphia, PA, United States; (Alexander) Department of Obstetrics, Jefferson Medical College, Philadelphia, PA, United States; (Nyirjesy) New College Building, 245 N. 15th Street, Philadelphia, PA 19102, United States

Language: English

Abstract: Objective: Candida parapsilosis is an infrequent isolate on vaginal cultures; its role as a vaginal pathogen remains unstudied. This retrospective study of women with positive culture for C. parapsilosis sought to characterize the significance of this finding and its response to antifungal therapy. Methods: From February 2001 to August 2002, we identified all individuals with positive fungal isolates among a population of women with chronic vulvovaginal symptoms. Charts of women with C. parapsilosis cultures were reviewed with regard to patient demographics, clinical presentation and therapeutic response. Mycological cure, defined as a negative fungal culture at the next office visit, and clinical cure, i.e. symptom resolution, were determined for each subject. Results: A total of 582 women had positive vaginal cultures for 635 isolates, of which 54 (8.5%) were C. parapsilosis. The charts of 51 subjects with C. parapsilosis were available for review and follow-up cultures and clinical information were available for 39 (76.5%).

Microscopy was positive in 9 (17.6%). Antifungal treatment resulted in mycological cure in 17/19 patients with fluconazole, 7/7 with butoconazole, 6/6 with boric acid, 1/1 with miconazole and occurred spontaneously in 6/ 7: 24/37 (64.9%) patients with a mycological cure experienced clinical cure. Conclusions: Although C. parapsilosis is often a cause of vaginal symptoms, it seems to respond to a variety of antifungal agents and may even be a transient vaginal colonizer. © 2005 Taylor & Francis Group Ltd.

Country of Publication: United Kingdom

Publisher: Taylor and Francis Ltd.

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 64872-76-0 (butoconazole); 64872-77-1 (butoconazole); 86386-73-4 (fluconazole); 22916-47-8 (miconazole)

Publication Type: Journal: Review

Subject Headings:
*Candida parapsilosis
clinical feature
controlled study
demography
female
follow up
fungus culture
fungus isolation
human
major clinical study
priority journal
review
treatment outcome
"*vagina candidiasis/dt [Drug Therapy]"
"*vagina candidiasis/et [Etiology]"
"boric acid/dt [Drug Therapy]"
"butoconazole/dt [Drug Therapy]"
"fluconazole/dt [Drug Therapy]"
"miconazole/dt [Drug Therapy]"

Source: EMBASE

Full Text: Available from *EBSCOhost* in *Infectious Diseases in Obstetrics & Gynecology*
Available from *ProQuest* in *Infectious Diseases in Obstetrics and Gynecology*
Available from *National Library of Medicine* in *Infectious Diseases in Obstetrics and Gynecology*

31. Recurrent vulvovaginal candidiasis

Citation: Missouri medicine, March 2006, vol./is. 103/2(165-168), 0026-6620 (2006 Mar-Apr)

Author(s): Ringdahl E.N.

Institution: (Ringdahl) Department of Family and Community Medicine, University of Missouri, Columbia, USA.

Language: English

Abstract: Recurrent vulvovaginal candidiasis affects five percent of women of child-bearing age. The most common organism is Candidia albicans, but an increasing number of infections are caused by nonalbicans species. Fungal culture directs treatment as nonalbicans species may be azole resistant. C. albicans will respond to anyazole antifungal. Treat C. glabrata with boric acid. Maintenance therapy should be started immediately after treatment of the acute episode and should last for six months.

Country of Publication: United States

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 65277-42-1 (ketoconazole)

Publication Type: Journal: Review

Subject Headings:
acute disease
Candida albicans
Candida glabrata
drug effect
female
human
patient care
"recurrent disease/pc [Prevention]"
review
"*vagina candidiasis/di [Diagnosis]"
"*vagina candidiasis/dt [Drug Therapy]"
"*vagina candidiasis/pc [Prevention]"
"*antifungal agent/dt [Drug Therapy]"
"boric acid/dt [Drug Therapy]"
"ketoconazole/dt [Drug Therapy]"

Source: EMBASE

32. Recurrent vulvovaginal candidiasis.

Citation: Missouri medicine, Mar 2006, vol. 103, no. 2, p. 165-168, 0026-6620 (2006 Mar-Apr)

Author(s): Ringdahl, Erika N

Abstract: Recurrent vulvovaginal candidiasis affects five percent of women of child-bearing age. The most common organism is Candidia albicans, but an increasing number of infections are caused by nonalbicans species. Fungal culture directs treatment as nonalbicans species may be azole resistant. C. albicans will respond to anyazole antifungal. Treat C. glabrata with boric acid. Maintenance therapy should be started immediately after treatment of the acute episode and should last for six months.

Subject Headings:
Ketoconazole
Candida albicans
Humans
Candidiasis Vulvovaginal
Antifungal Agents
Secondary Prevention
Index Medicus
Female
Boric Acids
Acute Disease
Candida glabrata
Episode of Care

Source: Medline

33. Entrapment of lipase in polymer of polyvinyl alcohol-boric acid for esterification in organic media

Citation: Indian Journal of Biotechnology, July 2006, vol./is. 5/3(368-372), 0972-5849 (July 2006)

Author(s): Dave R.; Madamwar D.

Institution: (Dave, Madamwar) Post-Graduate Department of Biosciences, Sardar Patel University, Vallabh Vidyanagar 388 120, India

Language: English

Abstract: Polyvinyl alcohol (PVA)-boric acid method has been utilized for entrapment of Candida rugosa lipase. Immobilized lipase was used to produce ethyl butyrate, a flavour ester showing 80.2% conversion in 72 h. Lipase in PVA-boric acid beads possessed the ability to synthesize variety of esters and was stable in various organic solvents with varying log P value from 2 to 8 under incubation at 50degreeC for 1 h. The immobilized lipase showed nearly full retention of activity even after 8 cycles of use, the activity then gradually decreased reaching to 56% conversion efficiency after 20 cycles and possesses a shelf-life of 10 months. The thermostability of the lipase increased three times upon

immobilization. The immobilized enzyme possessed 40% higher activity compared to its free counterpart.

Country of Publication: India

Publisher: National Institute of Science Communication and Information Resources (NISCAIR)

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 105-54-4 (butyric acid ethyl ester); 37380-95-3 (polyvinyl alcohol); 9002-89-5 (polyvinyl alcohol); 9001-62-1 (triacylglycerol lipase)

Publication Type: Journal: Conference Paper

Subject Headings:
Candida rugosa
conference paper
enzyme activity
enzyme immobilization
enzyme stability
esterification
thermostability
boric acid
butyric acid ethyl ester
*fungal enzyme
organic solvent
polymer
polyvinyl alcohol
*triacylglycerol lipase

Source: EMBASE

34. Boric acid for refractory candida glabrata vaginitis

Citation: Journal of Obstetrics and Gynaecology, August 2006, vol./is. 26/6(584), 0144-3615;1364-6893 (01 Aug 2006)

Author(s): Dhingra S.; Roseblade C.K.

Institution: (Dhingra, Roseblade) Department of Obstetrics and Gynaecology, Wrexham Maelor Hospital, Wrexham, United Kingdom; (Dhingra) 15 Heol Mynydd Bychan, Heath, Cardiff CF14 4NL, United Kingdom

Language: English

Country of Publication: United Kingdom

Publisher: Taylor and Francis Ltd.

CAS Registry Number: 12633-72-6 (amphotericin); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 86386-73-4 (fluconazole); 2022-85-7 (flucytosine); 84625-61-6 (itraconazole)

Publication Type: Journal: Article

Subject Headings:
adult
article
*Candida glabrata
case report
drug safety
female
fungus culture
human
nonhuman
priority journal
symptomatology
treatment response
"unspecified side effect/si [Side Effect]"
vagina smear
"*vaginitis/dt [Drug Therapy]"

"*vaginitis/et [Etiology]"
"amphotericin/cb [Drug Combination]"
"amphotericin/dt [Drug Therapy]"
"amphotericin/tp [Topical Drug Administration]"
"*boric acid/ae [Adverse Drug Reaction]"
"*boric acid/dt [Drug Therapy]"
"*boric acid/va [Intravaginal Drug Administration]"
"fluconazole/dt [Drug Therapy]"
"fluconazole/po [Oral Drug Administration]"
"flucytosine/cb [Drug Combination]"
"flucytosine/dt [Drug Therapy]"
"flucytosine/tp [Topical Drug Administration]"
itraconazole

Source: EMBASE

Full Text: Available from *EBSCOhost* in *Journal of Obstetrics & Gynaecology*

35. Boric acid for refractory Candida glabrata vaginitis.

Citation: Journal of obstetrics and gynaecology : the journal of the Institute of Obstetrics and Gynaecology, Aug 2006, vol. 26, no. 6, p. 584., 0144-3615 (August 2006)

Author(s): Dhingra, S; Roseblade, C K

Subject Headings:
Vaginitis
Middle Aged
Humans
Candidiasis
Index Medicus
Female
Boric Acids
Candida glabrata

Source: Medline

Full Text: Available from *EBSCOhost* in *Journal of Obstetrics & Gynaecology*

36. Candidiasis (vulvovaginal).

Citation: BMJ clinical evidence, Jan 2007, vol. 2007, 1752-8526 (2007)

Author(s): Spence, Des

Abstract: Vulvovaginal candidiasis is estimated to be the second most common cause of vaginitis after bacterial vaginosis. Candida albicans accounts for 85-90% of cases. We conducted a systematic review and aimed to answer the following clinical questions: What are the effects of drug treatments, alternative or complementary treatments for acute vulvovaginal candidiasis in non-pregnant symptomatic women? What are the effects of treating a male sexual partner to resolve symptoms and prevent recurrence in non-pregnant women with symptomatic acute vulvovaginal candidiasis? What are the effects of drug treatments, alternative or complementary treatments for recurrent vulvovaginal candidiasis in non-pregnant symptomatic women? What are the effects of treating a male sexual partner in non-pregnant women with symptomatic recurrent vulvovaginal candidiasis? What are the effects of treating asymptomatic non-pregnant women with a positive swab for candidiasis? We searched: Medline, Embase, The Cochrane Library and other important databases up to October 2006 (Clinical Evidence reviews are updated periodically, please check our website for the most up-to-date version of this review). We included harms alerts from relevant organisations such as the US Food and Drug Administration (FDA) and the UK Medicines and Healthcare products Regulatory Agency (MHRA). We found 58 systematic reviews, RCTs, or observational studies that met our inclusion criteria. We performed a GRADE evaluation of the quality of evidence for interventions. In this systematic review we present information relating to the effectiveness and safety of the following interventions: alternative or complementary treatments, douching, drug treatments, garlic, intravaginal preparations (boric acid,

nystatin, imidazoles, tea tree oil), oral fluconazole, oral itraconazole, treating a male sexual partner, and yoghurt containing Lactobacillus acidophilus (oral or vaginal).

Subject Headings:
Administration Intravaginal
Humans
Administration Oral
Candidiasis Vulvovaginal
Intraabdominal Infections
Clinical Trials as Topic
Index Medicus
Vaginosis Bacterial
United States Food and Drug Administration

Source: Medline

Full Text: Available from *National Library of Medicine* in *Clinical Evidence*
Available from *National Library of Medicine* in *BMJ Clinical Evidence*

37. Candidiasis (vulvovaginal)

Citation: BMJ clinical evidence, 2007, vol./is. 2007/(no pagination), 1752-8526 (2007)

Author(s): Spence D.

Institution: (Spence) General Practice, Glasgow University, Glasgow, Scotland

Language: English

Abstract: INTRODUCTION: Vulvovaginal candidiasis is estimated to be the second most common cause of vaginitis after bacterial vaginosis. Candida albicans accounts for 85-90% of cases.METHODS AND OUTCOMES: We conducted a systematic review and aimed to answer the following clinical questions: What are the effects of drug treatments, alternative or complementary treatments for acute vulvovaginal candidiasis in non-pregnant symptomatic women? What are the effects of treating a male sexual partner to resolve symptoms and prevent recurrence in non-pregnant women with symptomatic acute vulvovaginal candidiasis? What are the effects of drug treatments, alternative or complementary treatments for recurrent vulvovaginal candidiasis in non-pregnant symptomatic women? What are the effects of treating a male sexual partner in non-pregnant women with symptomatic recurrent vulvovaginal candidiasis? What are the effects of treating asymptomatic non-pregnant women with a positive swab for candidiasis? We searched: Medline, Embase, The Cochrane Library and other important databases up to October 2006 (Clinical Evidence reviews are updated periodically, please check our website for the most up-to-date version of this review). We included harms alerts from relevant organisations such as the US Food and Drug Administration (FDA) and the UK Medicines and Healthcare products Regulatory Agency (MHRA).RESULTS: We found 58 systematic reviews, RCTs, or observational studies that met our inclusion criteria. We performed a GRADE evaluation of the quality of evidence for interventions.CONCLUSIONS: In this systematic review we present information relating to the effectiveness and safety of the following interventions: alternative or complementary treatments, douching, drug treatments, garlic, intravaginal preparations (boric acid, nystatin, imidazoles, tea tree oil), oral fluconazole, oral itraconazole, treating a male sexual partner, and yoghurt containing Lactobacillus acidophilus (oral or vaginal).

Country of Publication: United Kingdom

Publication Type: Journal: Review

Subject Headings:
abdominal infection
clinical trial(topic)
food and drug administration
human
intravaginal drug administration
oral drug administration
*vagina candidiasis
*vaginitis

Source: EMBASE

Full Text: Available from *National Library of Medicine* in *Clinical Evidence*
Available from *National Library of Medicine* in *BMJ Clinical Evidence*

38. Prevalence of Candida glabrata and its response to boric acid vaginal suppositories in comparison with oral fluconazole in patients with diabetes and vulvovaginal candidiasis

Citation: Diabetes Care, February 2007, vol./is. 30/2(312-317), 0149-5992;0149-5992 (February 2007)

Author(s): Ray D.; Goswami R.; Banerjee U.; Dadhwal V.; Goswami D.; Mandal P.; Sreenivas V.; Kochupillai N.

Institution: (Ray, Goswami, Kochupillai) Department of Endocrinology and Metabolism, All India Institute of Medical Sciences, New Delhi, India; (Banerjee, Mandal) Department of Microbiology, All India Institute of Medical Sciences, New Delhi, India; (Dadhwal) Department of Obstetrics and Gynecology, All India Institute of Medical Sciences, New Delhi, India; (Goswami) Department of Obstetrics and Gynecology, Maulana Azad Medical College, New Delhi, India; (Sreenivas) Department of Biostatistics, All India Institute of Medical Sciences, New Delhi, India; (Goswami) Department of Endocrinology and Metabolism, All India Institute of Medical Sciences, New Delhi 110029, India

Language: English

Abstract: OBJECTIVE - A large proportion of vulvovaginal candidiasis (VVC) in diabetes is due to non-albicans Candida species such as C. glabrata and C. tropicalis. Observational studies indicate that diabetic patients with C. glabrata VVC respond poorly to azole drugs. We evaluated the response to oral fluconazole and boric acid vaginal suppositories in diabetic patients with VVC. RESEARCH DESIGN AND METHODS - A total of 112 consecutive diabetic patients with VVC were block randomized to receive either single-dose oral 150-mg fluconazole or boric acid vaginal suppositories (600 mg/day for 14 days). The primary efficacy outcome was the mycological cure in patients with C. glabrata VVC in the two treatment arms. The secondary outcomes were the mycological cure in C. albicans VVC, overall mycological cure irrespective of the type of Candida species, frequencies of yeast on direct microscopy, and clinical symptoms and signs of VVC on the 15th day of treatment. Intention-to-treat (ITT; n = 111) and per-protocol (PP; n = 99) analyses were performed. RESULTS - C. glabrata was isolated in 68 (61.3%) and C. albicans in 32 (28.8%) of 111 subjects. Patients with C. glabrata VVC showed higher mycological cure with boric acid compared with fluconazole in the ITT (21 of 33, 63.6% vs. 10 of 35, 28.6%; P = 0.01) and PP analyses (21 of 29, 72.4% vs. 10 of 30, 33.3%; P = 0.01). The secondary efficacy outcomes were not significantly different in the two treatment arms in the ITT and PP analyses. CONCLUSIONS - Diabetic women with C. glabrata VVC show higher mycological cure with boric acid vaginal suppositories given for 14 days in comparison with single-dose oral 150-mg fluconazole. © 2007 by the American Diabetes Association.

Country of Publication: United States

Publisher: American Diabetes Association Inc.

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 86386-73-4 (fluconazole); 62572-11-6 (hemoglobin A1c); 9004-10-8 (insulin)

Publication Type: Journal: Article

Subject Headings:
adult
article
Candida albicans
Candida glabrata
clinical trial
controlled clinical trial
controlled study
drug efficacy
drug withdrawal

female
fungus isolation
hemoglobin blood level
human
"*insulin dependent diabetes mellitus/dt [Drug Therapy]"
major clinical study
"*non insulin dependent diabetes mellitus/dt [Drug Therapy]"
patient compliance
prevalence
randomized controlled trial
single drug dose
suppository
treatment outcome
"*vagina candidiasis/co [Complication]"
"*vagina candidiasis/di [Diagnosis]"
"*vagina candidiasis/dt [Drug Therapy]"
"*vagina candidiasis/et [Etiology]"
"vaginal burning sensation/si [Side Effect]"
"*boric acid/ae [Adverse Drug Reaction]"
"*boric acid/ct [Clinical Trial]"
"*boric acid/cm [Drug Comparison]"
"*boric acid/dt [Drug Therapy]"
"*boric acid/va [Intravaginal Drug Administration]"
"*fluconazole/ct [Clinical Trial]"
"*fluconazole/cm [Drug Comparison]"
"*fluconazole/dt [Drug Therapy]"
"*fluconazole/po [Oral Drug Administration]"
"hemoglobin A1c/ec [Endogenous Compound]"
"insulin/dt [Drug Therapy]"
"oral antidiabetic agent/dt [Drug Therapy]"

Source: EMBASE

Full Text: Available from *ProQuest* in *Diabetes Care*

39. Prevalence of Candida glabrata and its response to boric acid vaginal suppositories in comparison with oral fluconazole in patients with diabetes and vulvovaginal candidiasis.

Citation: Diabetes care, Feb 2007, vol. 30, no. 2, p. 312-317, 0149-5992 (February 2007)

Author(s): Ray, Debarti; Goswami, Ravinder; Banerjee, Uma; Dadhwal, Vatsla; Goswami, Deepti; Mandal, Piyali; Sreenivas, Vishnubhatla; Kochupillai, Narayana

Abstract: A large proportion of vulvovaginal candidiasis (VVC) in diabetes is due to non-albicans Candida species such as C. glabrata and C. tropicalis. Observational studies indicate that diabetic patients with C. glabrata VVC respond poorly to azole drugs. We evaluated the response to oral fluconazole and boric acid vaginal suppositories in diabetic patients with VVC. A total of 112 consecutive diabetic patients with VVC were block randomized to receive either single-dose oral 150-mg fluconazole or boric acid vaginal suppositories (600 mg/day for 14 days). The primary efficacy outcome was the mycological cure in patients with C. glabrata VVC in the two treatment arms. The secondary outcomes were the mycological cure in C. albicans VVC, overall mycological cure irrespective of the type of Candida species, frequencies of yeast on direct microscopy, and clinical symptoms and signs of VVC on the 15th day of treatment. Intention-to-treat (ITT; n = 111) and per-protocol (PP; n = 99) analyses were performed. C. glabrata was isolated in 68 (61.3%) and C. albicans in 32 (28.8%) of 111 subjects. Patients with C. glabrata VVC showed higher mycological cure with boric acid compared with fluconazole in the ITT (21 of 33, 63.6% vs. 10 of 35, 28.6%; P = 0.01) and PP analyses (21 of 29, 72.4% vs. 10 of 30, 33.3%; P = 0.01). The secondary efficacy outcomes were not significantly different in the two treatment arms in the ITT and PP analyses. Diabetic women with C. glabrata VVC show higher mycological cure with boric acid vaginal suppositories given for 14 days in comparison with single-dose oral 150-mg fluconazole.

Subject Headings: Candida albicans
Humans
Administration Oral
Candidiasis Vulvovaginal
Antifungal Agents
Index Medicus
Vagina
Adult
Female
Middle Aged
Boric Acids
Fluconazole
Suppositories
Candida glabrata

Source: Medline

Full Text: Available from *ProQuest* in *Diabetes Care*

40. Study on physicochemical properties and pharmacodynamic action of recombinant uricase

Citation: Pharmaceutical Biotechnology, April 2007, vol./is. 14/2(131-135), 1005-8915 (April 2007)

Author(s): Li X.-J.; Li Y.-X.; Chen J.-H.

Institution: (Li, Li, Chen) Department of Molecular Biology, China Pharmaceutical University, Nanjing 210009, China

Language: Chinese

Abstract: The uricase of Candida utilis was expressed in recombinant Escherichia coli. Its physico-chemical properties and pharmacodynamic action was studied. Its subunit molecular weight was analysed by SDS-PAGE. Its optimum temperature and pH value were detected, and its thermal and pH stability were also found. A mouse hyperuricemia model was established and the pharmacodynamic action of the recombinant uricase was studied in vivo on the established model. Molecular weight of the recombinant uricase subunit was 32.4 ku in SDS-PAGE. The recombinant enzyme had the strongest reactive ability in pH 8.0 boric acid buffer at 40degreeC. It also showed good stability at pH 6-12, and at the temperature 20degreeC-60degreeC. The pharmacodynamic experiment showed that the recombinant uricase could greatly reduce the level of uric acid in the model mouse's serum.

Country of Publication: China

Publisher: China Pharmaceutical University

Publication Type: Journal: Article

Subject Headings: animal cell
animal experiment
animal model
article
Candida utilis
controlled study
drug screening
drug stability
Escherichia coli
expression vector
"*hyperuricemia/dt [Drug Therapy]"
in vivo study
molecular weight
mouse
nonhuman
pH
pharmacodynamics

physical chemistry
polyacrylamide gel electrophoresis
temperature measurement
thermostability
"*recombinant enzyme/an [Drug Analysis]"
"*recombinant enzyme/dv [Drug Development]"
"*recombinant enzyme/dt [Drug Therapy]"
"*recombinant enzyme/pd [Pharmacology]"
"*recombinant urate oxidase/an [Drug Analysis]"
"*recombinant urate oxidase/dv [Drug Development]"
"*recombinant urate oxidase/dt [Drug Therapy]"
"*recombinant urate oxidase/pd [Pharmacology]"
unclassified drug

Source: EMBASE

41. Phospholipase, proteinase and haemolytic activities of Candida albicans isolated from oral cavities of patients with type 2 diabetes mellitus

Citation: Journal of Medical Microbiology, October 2007, vol./is. 56/10(1393-1398), 0022-2615 (October 2007)

Author(s): Tsang C.S.P.; Chu F.C.S.; Leung W.K.; Jin L.J.; Samaranayake L.P.; Siu S.C.

Institution: (Tsang, Chu, Leung, Jin, Samaranayake) Faculty of Dentistry, University of Hong Kong, Prince Philip Dental Hospital, Hong Kong, Hong Kong; (Siu) Integrated Diabetes Mellitus Research and Training Centre, Department of Medicine and Rehabilitation, Tung Wah Eastern Hospital, Hong Kong, Hong Kong

Language: English

Abstract: The aim of this study was to biotype and characterize phospholipase, proteinase and haemolytic activities of oral Candida albicans isolates from 210 Chinese patients with type 2 diabetes mellitus (DM) and 210 age- and sex-matched healthy controls. Seventy-six and 50 C. albicans isolates were obtained from type 2 DM patients and controls, respectively, using the oral rinse technique. The isolates were characterized with a biotyping system based on enzyme profiles, carbohydrate assimilation patterns and boric acid resistance of the yeasts, and the isolates were further tested for in vitro phospholipase, proteinase and haemolytic activities. The major biotypes of C. albicans isolates from the type 2 DM and control groups were A1R (42.1 %) and J1R (36.0%), respectively. Significantly higher proteinase and haemolytic activities were found in the isolates from the type 2 DM group (P<0.05). Proteinase activity was higher in isolates from patients with > 10 years of DM history than those with <10 years (P<0.05). Haemolytic activity was significantly higher in isolates from female DM patients than in those from male counterparts (P<0.05). These data provide evidence of increased extracellular enzyme activity in Candida isolates taken from DM patients. © 2007 SGM.

Country of Publication: United Kingdom

Publisher: Society for General Microbiology

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 9013-93-8 (phospholipase); 9001-92-7 (proteinase)

Publication Type: Journal: Article

Subject Headings:
adult
article
biotype
*Candida albicans
controlled study
enzyme activity
female
fungus isolation
human

in vitro study
major clinical study
male
mouth cavity
*non insulin dependent diabetes mellitus
priority journal
sex difference
boric acid
carbohydrate
hemolysin
*phospholipase
*proteinase

Source: EMBASE

42. Prolonged (3-month) mycological cure rate after boric acid suppositories in diabetic women with vulvovaginal candidiasis.

Citation: The Journal of infection, Oct 2007, vol. 55, no. 4, p. 374-377, 1532-2742 (October 2007)

Author(s): Ray, Debarti; Goswami, Ravinder; Dadhwal, Vatsla; Goswami, Deepti; Banerjee, Uma; Kochupillai, Narayana

Abstract: Patients with diabetes mellitus (DM) are at increased risk of vulvovaginal candidiasis (VVC) due to C. glabrata. In our previous study we had shown that patients with diabetes mellitus and VVC show an overall superior mycological cure rate (74% versus 51%) with boric acid therapy at 15th day as compared to fluconazole. Present study was carried out to assess long term response to boric acid in diabetic women with VVC. Subjects included 40 consecutive diabetic women (type 2 DM=26 and type 1 DM=14) who had achieved mycological cure (high vaginal swab culture negativity) on day 15 of therapy following single-dose oral-150 mg fluconazole (n=21) or 600 mg of boric acid suppositories given daily for 14 days (n=19). At third month of follow up, patients were assessed for signs and symptoms of VVC and a repeat HVS was collected for fungal culture. HbA1c was measured to assess glycaemic control. The mean age, BMI, HBA1c and frequency of various Candida species isolated at initial diagnosis were comparable in the fluconazole and boric acid treatment groups. Fifteen of 21 (71.4%) and 12 of 19 (63.1%) women who achieved mycological cure at 15 day remain cured at three months in the fluconazole and boric acid treated groups, respectively (P=0.83). With 74% mycological cure at 15th day, this would indicate that on an average only 46.6% of diabetic women with VVC would remain cured at 3 months after a course of 14 days boric acid therapy. Most of the patients relapsed with no change in Candida species. The demographic profile and mean HbA1c (8.6+/-2.2 versus 8.8+/-2.4%, P=0.83) were comparable in patients with (n=27) and without mycological cure (n=13). The results of the current study indicating comparable mycological cure rate at 3 months between fluconazole and boric acid treated patients would support use of boric acid in the acute management of VVC in view of its superior short term response in diabetic women with C. glabrata infections. However, there is need to explore other therapeutic regimens which are effective in achieving long term mycological cure in diabetic women with VVC.

Subject Headings:
Time Factors
Prospective Studies
Humans
Administration Oral
Candidiasis Vulvovaginal
Antifungal Agents
Index Medicus
Treatment Outcome
Adult
Female
Middle Aged
Boric Acids
Fluconazole

Suppositories
Diabetes Mellitus Type 2

Source: Medline

Full Text: Available from *Elsevier* in *Journal of Infection*

43. Prolonged (3-month) mycological cure rate after boric acid suppositories in diabetic women with vulvovaginal candidiasis

Citation: Journal of Infection, October 2007, vol./is. 55/4(374-377), 0163-4453 (October 2007)

Author(s): Ray D.; Goswami R.; Dadhwal V.; Goswami D.; Banerjee U.; Kochupillai N.

Institution: (Ray, Goswami, Kochupillai) Department of Endocrinology and Metabolism, All India Institute of Medical Sciences, Ansari Nagar, New Delhi, 110029, India; (Banerjee) Department of Microbiology, All India Institute of Medical Sciences, Ansari Nagar, New Delhi, 110029, India; (Dadhwal) Department of Obstetrics and Gynecology, All India Institute of Medical Sciences, Ansari Nagar, New Delhi, 110029, India; (Goswami) Maulana Azad Medical College, New Delhi, India

Language: English

Abstract: Objective: Patients with diabetes mellitus (DM) are at increased risk of vulvovaginal candidiasis (VVC) due to C. glabrata. In our previous study we had shown that patients with diabetes mellitus and VVC show an overall superior mycological cure rate (74% versus 51%) with boric acid therapy at 15th day as compared to fluconazole. Present study was carried out to assess long term response to boric acid in diabetic women with VVC. Material and methods: Subjects included 40 consecutive diabetic women (type 2 DM = 26 and type 1 DM = 14) who had achieved mycological cure (high vaginal swab culture negativity) on day 15 of therapy following single-dose oral-150 mg fluconazole (n = 21) or 600 mg of boric acid suppositories given daily for 14 days (n = 19). At third month of follow up, patients were assessed for signs and symptoms of VVC and a repeat HVS was collected for fungal culture. HbA1c was measured to assess glycaemic control. Results: The mean age, BMI, HBA1c and frequency of various Candida species isolated at initial diagnosis were comparable in the fluconazole and boric acid treatment groups. Fifteen of 21 (71.4%) and 12 of 19 (63.1%) women who achieved mycological cure at 15 day remain cured at three months in the fluconazole and boric acid treated groups, respectively (P = 0.83). With 74% mycological cure at 15th day, this would indicate that on an average only 46.6% of diabetic women with VVC would remain cured at 3 months after a course of 14 days boric acid therapy. Most of the patients relapsed with no change in Candida species. The demographic profile and mean HbA1c (8.6 +/- 2.2 versus 8.8 +/- 2.4%, P = 0.83) were comparable in patients with (n = 27) and without mycological cure (n = 13). Conclusion: The results of the current study indicating comparable mycological cure rate at 3 months between fluconazole and boric acid treated patients would support use of boric acid in the acute management of VVC in view of its superior short term response in diabetic women with C. glabrata infections. However, there is need to explore other therapeutic regimens which are effective in achieving long term mycological cure in diabetic women with VVC. © 2007 The British Infection Society.

Country of Publication: United Kingdom

Publisher: W.B. Saunders Ltd

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 86386-73-4 (fluconazole); 62572-11-6 (hemoglobin A1c)

Publication Type: Journal: Article

Subject Headings:
adult
age
article
body mass
Candida
Candida glabrata
clinical article
clinical trial

controlled clinical trial
controlled study
diabetes control
*diabetes mellitus
drug efficacy
drug response
female
follow up
fungus culture
fungus isolation
hemoglobin blood level
human
insulin dependent diabetes mellitus
long term care
non insulin dependent diabetes mellitus
randomized controlled trial
relapse
single drug dose
statistical significance
suppository
treatment duration
"*vagina candidiasis/dt [Drug Therapy]"
vagina smear
"*boric acid/ct [Clinical Trial]"
"*boric acid/cm [Drug Comparison]"
"*boric acid/dt [Drug Therapy]"
"*boric acid/va [Intravaginal Drug Administration]"
"*fluconazole/ct [Clinical Trial]"
"*fluconazole/cm [Drug Comparison]"
"*fluconazole/dt [Drug Therapy]"
"*fluconazole/po [Oral Drug Administration]"
"hemoglobin A1c/ec [Endogenous Compound]"

Source: EMBASE

Full Text: Available from *Elsevier* in *Journal of Infection*

44. Local treatment of vulvovaginal candidosis: General and practical considerations

Citation: Drugs, 2008, vol./is. 68/13(1787-1802), 0012-6667;0012-6667 (2008)

Author(s): Das Neves J.; Pinto E.; Teixeira B.; Dias G.; Rocha P.; Cunha T.; Santos B.; Amaral M.H.; Bahia M.F.

Institution: (Das Neves, Pinto) Department of Microbiology, Faculty of Pharmacy, University of Porto, Porto, Portugal; (Das Neves, Amaral, Bahia) Department of Pharmaceutical Technology, Faculty of Pharmacy, University of Porto, Porto, Portugal; (Das Neves, Teixeira, Dias, Rocha, Cunha, Santos) Department of Pharmacy, Hospital Geral de Santo Antonio, Porto, Portugal; (Das Neves) Department of Pharmaceutical Technology, Faculty of Pharmacy, University of Porto, Rua Anibal Cunha, 164, 4050-047, Porto, Portugal

Language: English

Abstract: Vulvovaginal candidosis is a common worldwide female medical problem, occurring mostly in women of childbearing age. Currently available options for the treatment of this condition include local and oral (systemic) therapy. Both alternatives have been considered equally effective in the treatment of uncomplicated vulvovaginal candidosis, although oral regimens are often preferred by physicians and women. However, local treatment presents several advantageous and unique features that may favour this therapeutic approach. The availability of numerous antifungal drugs and products for topical administration makes the selection quite challenging as this task is mostly based on personal experience or anecdotal data. Also, recent advances have been made in topical antifungal formulations and there is an increasing availability of over-the-counter

products. Therefore, a review of both general and practical considerations related to the local treatment of vulvovaginal candidosis is timely. In summary, azoles and short-term regimens are usually recommended for the local treatment of vulvovaginal candidosis, with nystatin and boric acid considered as second-line alternatives. Unconventional approaches may also be regarded as suitable in patients refractory to usual treatments. In addition to the susceptibility of implicated Candida spp. to the antifungal agents, this choice should take into consideration other important issues such as particular situations (e.g. pregnancy, menopause, drug hypersensitivity), women's preferences, and the availability, particularities and cost of antifungal formulations. © 2008 Adis Data Information BV. All rights reserved.

Country of Publication: New Zealand

Publisher: Adis International Ltd

CAS Registry Number: 1397-89-3 (amphotericin B); 30652-87-0 (amphotericin B); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 64872-76-0 (butoconazole); 64872-77-1 (butoconazole); 189768-38-5 (caspofungin); 29342-05-0 (ciclopirox); 23593-75-1 (clotrimazole); 80619-41-6 (echinocandin); 24169-02-6 (econazole); 27220-47-9 (econazole); 72479-26-6 (fenticonazole); 86386-73-4 (fluconazole); 2022-85-7 (flucytosine); 50-23-7 (hydrocortisone); 24168-96-5 (isoconazole); 27523-40-6 (isoconazole); 208538-73-2 (micafungin); 22916-47-8 (miconazole); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin); 171228-49-2 (posaconazole); 7681-11-0 (potassium iodide); 67915-31-5 (terconazole); 8007-46-3 (thyme oil); 61675-64-7 (tioconazole); 65899-73-2 (tioconazole); 137234-62-9 (voriconazole)

Publication Type: Journal: Review

Subject Headings:
Candida
cream
drug choice
drug contraindication
drug cost
drug effect
drug efficacy
"drug hypersensitivity/si [Side Effect]"
drug safety
drug sensitivity
female
human
immunotherapy
menopause
"mucocutaneous reaction/si [Side Effect]"
ointment
pregnancy
review
single drug dose
"skin manifestation/si [Side Effect]"
suppository
"unspecified side effect/si [Side Effect]"
"*vagina candidiasis/di [Diagnosis]"
"*vagina candidiasis/dm [Disease Management]"
"*vagina candidiasis/dr [Drug Resistance]"
"*vagina candidiasis/dt [Drug Therapy]"
"*vagina candidiasis/ep [Epidemiology]"
"vagina disease/si [Side Effect]"
"vagina irritation/si [Side Effect]"
"vaginal burning sensation/si [Side Effect]"
"amphotericin B/dt [Drug Therapy]"
"amphotericin B/va [Intravaginal Drug Administration]"
"anticoagulant agent/cb [Drug Combination]"
"anticoagulant agent/po [Oral Drug Administration]"

"*antifungal agent/ae [Adverse Drug Reaction]"
"*antifungal agent/dt [Drug Therapy]"
"*antifungal agent/va [Intravaginal Drug Administration]"
"*antifungal agent/po [Oral Drug Administration]"
"*antifungal agent/pr [Pharmaceutics]"
"*antifungal agent/pe [Pharmacoeconomics]"
"*antifungal agent/tp [Topical Drug Administration]"
"antiinfective agent/dt [Drug Therapy]"
"*boric acid/dt [Drug Therapy]"
"*boric acid/va [Intravaginal Drug Administration]"
"*boric acid/pe [Pharmacoeconomics]"
"*boric acid/tp [Topical Drug Administration]"
"butoconazole/dt [Drug Therapy]"
"butoconazole/pr [Pharmaceutics]"
"butoconazole/pe [Pharmacoeconomics]"
"caspofungin/dt [Drug Therapy]"
"ciclopirox/dt [Drug Therapy]"
"*clotrimazole/do [Drug Dose]"
"*clotrimazole/dt [Drug Therapy]"
"*clotrimazole/va [Intravaginal Drug Administration]"
"*clotrimazole/pr [Pharmaceutics]"
"*clotrimazole/pe [Pharmacoeconomics]"
"*clotrimazole/tp [Topical Drug Administration]"
"echinocandin/dt [Drug Therapy]"
"econazole/do [Drug Dose]"
"econazole/dt [Drug Therapy]"
"econazole/va [Intravaginal Drug Administration]"
"econazole/pe [Pharmacoeconomics]"
ecostatin 1 er
"fenticonazole/dt [Drug Therapy]"
"fenticonazole/va [Intravaginal Drug Administration]"
"*fluconazole/dt [Drug Therapy]"
"*fluconazole/po [Oral Drug Administration]"
"*fluconazole/pe [Pharmacoeconomics]"
"flucytosine/ae [Adverse Drug Reaction]"
"flucytosine/dt [Drug Therapy]"
gynazole 1
gyno aktarin
gynopevaryl lp
"hydrocortisone/dt [Drug Therapy]"
"isoconazole/do [Drug Dose]"
"isoconazole/dt [Drug Therapy]"
"isoconazole/va [Intravaginal Drug Administration]"
"micafungin/dt [Drug Therapy]"
"miconazole/do [Drug Dose]"
"miconazole/dt [Drug Therapy]"
"miconazole/va [Intravaginal Drug Administration]"
"miconazole/pr [Pharmaceutics]"
monistat 1
monistat 1 combination pack
"*nystatin/dt [Drug Therapy]"
"*nystatin/va [Intravaginal Drug Administration]"
"*nystatin/pe [Pharmacoeconomics]"
"*nystatin/tp [Topical Drug Administration]"
"polyene antibiotic agent/ae [Adverse Drug Reaction]"
"polyene antibiotic agent/dt [Drug Therapy]"
"posaconazole/dt [Drug Therapy]"
potassium iodide
"probiotic agent/dt [Drug Therapy]"
"probiotic agent/va [Intravaginal Drug Administration]"

"probiotic agent/tp [Topical Drug Administration]"
"pyrrole derivative/cb [Drug Combination]"
"pyrrole derivative/dt [Drug Therapy]"
"pyrrole derivative/tp [Topical Drug Administration]"
"tea tree oil/dv [Drug Development]"
"*terconazole/dt [Drug Therapy]"
"*terconazole/va [Intravaginal Drug Administration]"
"*terconazole/pr [Pharmaceutics]"
"thyme oil/dv [Drug Development]"
"tioconazole/dt [Drug Therapy]"
"tioconazole/va [Intravaginal Drug Administration]"
"tioconazole/pe [Pharmacoeconomics]"
unclassified drug
unindexed drug
"voriconazole/dt [Drug Therapy]"

Source: EMBASE

Full Text: Available from *EBSCOhost* in *Drugs*
Available from *Springer NHS Pilot 2014 (NESLi2)* in *Drugs*; Note: ; Collection notes: Academic-License. Please when asked to pick an institution please pick NHS. Please also note access is from 1997 to date only.
Available from *ProQuest* in *Drugs*
Available from *EBSCOhost* in *Drugs*

45. Recalcitrant Trichomonas Vaginalis Infections Successfully Treated With Vaginal Acidification

Citation: Journal of Obstetrics and Gynaecology Canada, 2008, vol./is. 30/1(55-58), 1701-2163 (2008)

Author(s): Aggarwal A.; Shier R.M.

Institution: (Aggarwal, Shier) Department of Obstetrics and Gynaecology, University of Toronto, Toronto, ON, Canada

Language: English

Abstract: Background: Recalcitrant vaginal trichomoniasis is extremely distressing for patients and frustrating for physicians because there are no current guidelines for treatment. Numerous studies have shown that an increase in vaginal pH creates a better environment for the growth of Trichomonas vaginalis. We describe two patients with recalcitrant trichomoniasis who were successfully treated using vaginal acidification. Cases: The first patient with trichomoniasis had a severe reaction to metronidazole, but the infection subsequently resolved after treatment with a combination of boric acid and clotrimazole. The second patient with resistant trichomoniasis had been treated unsuccessfully with multiple courses of metronidazole but was treated successfully with vaginal acidification using boric acid. Conclusion: A process of vaginal acidification resulted in resolution of recalcitrant Trichomonas vaginalis in two patients.

Country of Publication: United States

Publisher: Elsevier Inc.

CAS Registry Number: 127-08-2 (acetic acid); 127-09-3 (acetic acid); 64-19-7 (acetic acid); 71-50-1 (acetic acid); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 23593-75-1 (clotrimazole); 467-63-0 (crystal violet); 548-62-9 (crystal violet); 86386-73-4 (fluconazole); 39322-38-8 (metronidazole); 443-48-1 (metronidazole); 11035-13-5 (paromomycin); 1263-89-4 (paromomycin); 1390-73-4 (paromomycin); 51795-47-2 (paromomycin); 54597-56-7 (paromomycin); 7542-37-2 (paromomycin); 84420-34-8 (paromomycin); 25655-41-8 (povidone iodine)

Publication Type: Journal: Article

Subject Headings: adult
antibiotic resistance
article
bacterium culture

case report
colposcopy
debridement
disease severity
dose response
"drug hypersensitivity/dt [Drug Therapy]"
female
gynecologic care
human
middle aged
nonhuman
"respiratory tract disease/si [Side Effect]"
sexual behavior
single drug dose
*therapy
treatment outcome
"*trichomoniasis/di [Diagnosis]"
"*trichomoniasis/dr [Drug Resistance]"
"*trichomoniasis/th [Therapy]"
"*trichomoniasis/dt [Drug Therapy]"
"urticaria/si [Side Effect]"
"vagina mycosis/dt [Drug Therapy]"
*vaginal acidification
vaginitis
acetic acid
"*boric acid/va [Intravaginal Drug Administration]"
"*boric acid/dt [Drug Therapy]"
"clotrimazole/va [Intravaginal Drug Administration]"
"clotrimazole/dt [Drug Therapy]"
"conjugated estrogen/va [Intravaginal Drug Administration]"
"conjugated estrogen/dt [Drug Therapy]"
crystal violet
"fluconazole/po [Oral Drug Administration]"
"fluconazole/dt [Drug Therapy]"
"metronidazole/ae [Adverse Drug Reaction]"
"metronidazole/po [Oral Drug Administration]"
"metronidazole/dt [Drug Therapy]"
"paromomycin/tp [Topical Drug Administration]"
"paromomycin/dt [Drug Therapy]"
povidone iodine

Source: EMBASE

Full Text: Available from *Elsevier* in *Journal of Obstetrics and Gynaecology Canada*

46. Recalcitrant Trichomonas vaginalis infections successfully treated with vaginal acidification

Citation: Journal of obstetrics and gynaecology Canada : JOGC = Journal d'obstetrique et gynecologie du Canada : JOGC, January 2008, vol./is. 30/1(55-58), 1701-2163 (Jan 2008)

Author(s): Aggarwal A.; Shier R.M.

Institution: (Aggarwal, Shier) Department of Obstetrics and Gynaecology, University of Toronto, Toronto ON.

Language: English

Abstract: BACKGROUND: Recalcitrant vaginal trichomoniasis is extremely distressing for patients and frustrating for physicians because there are no current guidelines for treatment. Numerous studies have shown that an increase in vaginal pH creates a better environment for the growth of Trichomonas vaginalis. We describe two patients with recalcitrant trichomoniasis who were successfully treated using vaginal acidification. CASES: The first patient with trichomoniasis had a severe reaction to metronidazole, but the infection subsequently resolved after treatment with a combination of boric acid and

clotrimazole. The second patient with resistant trichomoniasis had been treated unsuccessfully with multiple courses of metronidazole but was treated successfully with vaginal acidification using boric acid. CONCLUSION: A process of vaginal acidification resulted in resolution of recalcitrant Trichomonas vaginalis in two patients.

Country of Publication: Canada

CAS Registry Number: 127-08-2 (acetic acid); 127-09-3 (acetic acid); 64-19-7 (acetic acid); 71-50-1 (acetic acid); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 23593-75-1 (clotrimazole); 467-63-0 (crystal violet); 548-62-9 (crystal violet)

Publication Type: Journal: Article

Subject Headings:
adult
animal
article
case report
drug effect
female
human
middle aged
parasitology
pH
recurrent disease
treatment outcome
"*Trichomonas vaginalis/dt [Drug Therapy]"
*vagina
"acetic acid/dt [Drug Therapy]"
"*antiprotozoal agent/dt [Drug Therapy]"
"*boric acid/dt [Drug Therapy]"
"*boric acid/pd [Pharmacology]"
"*clotrimazole/dt [Drug Therapy]"
"crystal violet/dt [Drug Therapy]"
"topical antiinfective agent/dt [Drug Therapy]"

Source: EMBASE

Full Text: Available from *Elsevier* in *Journal of Obstetrics and Gynaecology Canada*

47. Recalcitrant Trichomonas vaginalis infections successfully treated with vaginal acidification.

Citation: Journal of obstetrics and gynaecology Canada : JOGC = Journal d'obstétrique et gynécologie du Canada : JOGC, Jan 2008, vol. 30, no. 1, p. 55-58, 1701-2163 (January 2008)

Author(s): Aggarwal, Anjali; Shier, R Michael

Abstract: Recalcitrant vaginal trichomoniasis is extremely distressing for patients and frustrating for physicians because there are no current guidelines for treatment. Numerous studies have shown that an increase in vaginal pH creates a better environment for the growth of Trichomonas vaginalis. We describe two patients with recalcitrant trichomoniasis who were successfully treated using vaginal acidification. The first patient with trichomoniasis had a severe reaction to metronidazole, but the infection subsequently resolved after treatment with a combination of boric acid and clotrimazole. The second patient with resistant trichomoniasis had been treated unsuccessfully with multiple courses of metronidazole but was treated successfully with vaginal acidification using boric acid. A process of vaginal acidification resulted in resolution of recalcitrant Trichomonas vaginalis in two patients.

Subject Headings:
Antiprotozoal Agents
Animals
Clotrimazole
Hydrogen-Ion Concentration
Middle Aged
Humans

Trichomonas vaginalis
Recurrence
Vagina
Anti-Infective Agents Local
Adult
Female
Boric Acids
Treatment Outcome
Index Medicus
Trichomonas Vaginitis
Acetic Acid
Gentian Violet

Source: Medline

Full Text: Available from *Elsevier* in *Journal of Obstetrics and Gynaecology Canada*

48. Biotypes, genotypes and ketoconazole susceptibility of Candida albicans isolates from a group of Thai AIDS patients

Citation: New Microbiologica, July 2008, vol./is. 31/3(409-416), 1121-7138 (July 2008)

Author(s): Teanpaisan R.; Niyombandith M.; Pripatnanant P.; Sattayasanskul W.

Institution: (Teanpaisan) Department of Stomatology, Faculty of Dentistry, Prince of Songkla University, Hat-Yai, Songkhla, Thailand; (Niyombandith, Pripatnanant, Sattayasanskul) Department of Oral and Maxillofacial Surgery, Faculty of Dentistry, Prince of Songkla University, Hat-Yai, Songkhla, Thailand; (Teanpaisan) Department of Stomatology, Faculty of Dentistry, Prince of Songkla University, Hat-Yai, Songkhla 90112, Thailand

Language: English

Abstract: A total of eighty-seven Candida albicans isolates from a group of Thai AIDS patients were characterized for phenotypic and genotypic profiles and antifungal susceptibility to ketoconazole. Phenotyping of the isolates was carried out by a biotyping method based on the enzyme profiles, carbohydrate assimilation patterns and boric acid resistance of the yeasts. Genotyping was performed through randomly amplified polymorphic DNA (RAPD) analysis. Antifungal susceptibility of ketoconazole was performed using the NCCLS broth microdilution method. Combination of the biotypic tests revealed a total of 49 different biotypes. The most predominant was AlS (31%), the remaining biotypes represented only few isolates in each. RAPD profiles identified 14 clusters of genotype among the 87 isolates. Almost every individual harboured his/her own specific isolate and in 25 of 26 (96.2%) harboured more than one clonal type. The heterogeneity of both phenotypic and genotypic profiles of C. albicans isolates in this study was similar to previous reports from other oral sources in different geographic areas. All isolates were susceptible to ketoconazole. The findings may be useful as baseline information of oral C. albicans colonization in Thai population living in the south of Thailand.

Country of Publication: Italy

Publisher: Luigi Ponzio e figlio Editori

CAS Registry Number: 65277-42-1 (ketoconazole)

Publication Type: Journal: Article

Subject Headings: *acquired immune deficiency syndrome
article
*Candida albicans
drug effect
genetics
genotype
human
isolation and purification
microbiological examination
microbiology
polymerase chain reaction

Thailand
"*antifungal agent/pd [Pharmacology]"
"*ketoconazole/pd [Pharmacology]"

Source: EMBASE

49. Vulvovaginal candidiasis

Original Title: Vulvovaginal candidiasis

Citation: Tijdschrift voor Geneeskunde, 2009, vol./is. 65/23(1105-1110), 0371-683X (2009)

Author(s): Maurissen W.; Van Meensel B.; Verguts J.; Donders G.; Lagrou K.

Institution: (Maurissen, Lagrou) Dienst Laboratoriumgeneeskunde, UZ Leuven Campus Gasthuisberg, Herestraat 49, 3000 Leuven, Belgium; (Van Meensel) Medisch Centrum Huisartsen (MCH), Leuven, Belgium; (Verguts, Donders) Dienst Gynaecologie en Verloskunde, UZ Leuven Campus Gasthuisberg, Belgium; (Donders) Dienst Gynaecologie en Verloskunde, Regionaal Ziekenhuis Heilig Hart Tienen, Belgium; (Donders) Dienst Gynaecologie en Verloskunde, Hopital Citadelle, Lie, Belgium

Language: Dutch

Abstract: As many as 75 percent of the women report having at least one episode of vulvovaginal candidosis during their lifetime. The diagnosis of vulvovaginal candidosis requires clinical data as well as a positive microscopic examination and/or a positive culture. A vaginal culture is indicated only if the microscopic examination is negative during an acute vulvovaginal candidiasis episode. During a recurrent vulvovaginitis a vaginal culture has to be performed to confirm the diagnosis and to identify the specific Candida species involved. It is important to detect if a recurrent infection is caused by Candida glabrata. The physician may inform the patient that this species remains difficult to treat and select a treatment with an other antifungal agent than fluconazole (e.g. boric acid capsules). Recurrent vulvovaginal candidiasis is defined as four or more proven Candida vaginitis episodes yearly, and is actually treated with a maintenance therapy. Optimally this therapy is executed on degressive and individual basis applying strict follow-up criteria to decide if the medication may be altered. A correlation between in vitro antifungal susceptibility to fluconazole or other antimycotic drugs and clinical outcome has not been proven.

Country of Publication: Belgium

Publisher: Tijdschrift voor Geneeskunde (De Pintelaan 185, Gent B-9000, Belgium)

CAS Registry Number: 123-30-8 (4 aminophenol); 86386-73-4 (fluconazole); 84625-61-6 (itraconazole)

Publication Type: Journal: Article

Subject Headings:
article
Candida albicans
Candida glabrata
Candida krusei
Candida parapsilosis
Candida tropicalis
fungal detection
fungus culture
human
maintenance therapy
microscopy
"*recurrent infection/dt [Drug Therapy]"
Saccharomyces cerevisiae
"*vagina candidiasis/dt [Drug Therapy]"
"4 aminophenol/dt [Drug Therapy]"
"4 aminophenol/tp [Topical Drug Administration]"
"fluconazole/dt [Drug Therapy]"
"fluconazole/po [Oral Drug Administration]"
"itraconazole/dt [Drug Therapy]"
"itraconazole/po [Oral Drug Administration]"

Source: EMBASE

50. Boric acid addition to suppressive antimicrobial therapy for recurrent bacterial vaginosis

Citation: Sexually Transmitted Diseases, 2009, vol./is. 36/11(732-734), 0148-5717 (2009)

Author(s): Reichman O.; Akins R.; Sobel J.D.

Institution: (Reichman, Sobel) Division of Infectious Disease, Department of Medicine, Wayne State University School of Medicine, Detroit, MI, United States; (Akins) Department of Biochemistry and Molecular Biology, Wayne State University School of Medicine, Detroit, MI, United States

Language: English

Abstract: BACKGROUND:: Recurrent bacterial vaginosis (RBV) is extremely common and a source of frustration to patient and practitioners alike. In the absence of curative therapy, practitioners resort to retreating each individual episode. It has been suggested that vaginal biofilm in BV facilitates persistence of bacterial pathogens. Accordingly, topical boric acid (BA) aimed at biofilm removal was added to nitroimidazole induction and maintenance therapy creating a triple phase regimen to reduce symptomatic recurrence of BV in high-risk patients. METHOD:: Uncontrolled, nonrandomized, retrospective chart review of patients with RBV treated with 7 days of oral nitroimidazole; followed by 21 days of intravaginal BA 600 mg/day and if in remission treated with metronidazole gel twice weekly for 16 weeks. Outcome was determined using Amsel criteria. RESULTS:: Fifty-eight women were treated for a total of 77 episodes of RBV. Sixty episodes of BV were available for a follow-up evaluation 4 to 12 weeks after enrollment, having completed both nitroimidazole and BA therapy and before initiating vaginal metronidazole gel. Cure after nitroimidazole and BA therapy ranged from 88% to 92%, 7 and 12 weeks after the initial visit, respectively. Cumulative cure at 12, 16, and 28 weeks from initial visit was 87%, 78%, and 65%, respectively. A failure rate of 50% was documented by 36 weeks of follow-up. No adverse effects of BA were observed. CONCLUSION:: Clinical experience with a triple phase maintenance regimen for women with RBV was encouraging but requires validation in a prospective randomized controlled study. Copyright © 2009 American Sexually Transmitted Diseases Association All rights reserved.

Country of Publication: United States

Publisher: Lippincott Williams and Wilkins (530 Walnut Street,P O Box 327, Philadelphia PA 19106-3621, United States)

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 39322-38-8 (metronidazole); 443-48-1 (metronidazole); 19387-91-8 (tinidazole)

Publication Type: Journal: Article

Subject Headings:
adult
antibiotic therapy
article
biofilm
drug efficacy
drug treatment failure
female
follow up
human
major clinical study
recurrent infection
"*vaginitis/dt [Drug Therapy]"
"*boric acid/dt [Drug Therapy]"
"*boric acid/va [Intravaginal Drug Administration]"
"*metronidazole/dt [Drug Therapy]"
"*metronidazole/po [Oral Drug Administration]"

"*tinidazole/dt [Drug Therapy]"
"*tinidazole/po [Oral Drug Administration]"

Source: EMBASE

51. Antifungal mechanisms supporting boric acid therapy of Candida vaginitis

Citation: Journal of Antimicrobial Chemotherapy, 2009, vol./is. 63/2(325-336), 0305-7453;1460-2091 (2009)

Author(s): De Seta F.; Schmidt M.; Vu B.; Essmann M.; Larsen B.

Institution: (De Seta) Burlo Garofolo, University of Trieste, Trieste, Italy; (De Seta, Essmann, Larsen) Department of University Research, Des Moines University, Des Moines, IA, United States; (Schmidt) Department of Biochemistry and Nutrition, Des Moines University, Des Moines, IA, United States; (Vu) Department of Pharmaceutical Science, Drake University, Des Moines, IA, United States

Language: English

Abstract: Background: Boric acid is a commonly cited treatment for recurrent and resistant yeast vaginitis, but data about the extent and mechanism of its antifungal activity are lacking. Objectives: The aim of this study was to use in vitro methods to understand the spectrum and mechanism of boric acid as a potential treatment for vaginal infection. Methods Yeast and bacterial isolates were tested by agar dilution to determine the intrinsic antimicrobial activity of boric acid. Established microbial physiology methods illuminated the mechanism of the action of boric acid against Candida albicans. Results: C. albicans strains (including fluconazole-resistant strains) were inhibited at concentrations attainable intravaginally; as were bacteria. Broth dilution MICs were between 1563 and 6250 mg/L and boric acid proved fungistatic (also reflected by a decrease in CO<inf>2</inf> generation); prolonged culture at 50 000 mg/L was fungicidal. Several organic acids in yeast nitrogen broth yielded a lower pH than equimolar boric acid and sodium borate but were less inhibitory. Cold or anaerobic incubation protected yeast at high boric acid concentrations. Cells maintained integrity for 6 h in boric acid at 37degreeC, but after 24 h modest intrusion of propidium iodide occurred; loss of plate count viability preceded uptake of vital stain. Growth at sub-MIC concentrations of boric acid decreased cellular ergosterol. The drug efflux pump CDR1 did not protect Candida as CDR1 expression was abrogated by boric acid. Boric acid interfered with the development of biofilm and hyphal transformation. Conclusions: Boric acid is fungistatic to fungicidal depending on concentration and temperature. Inhibition of oxidative metabolism appears to be a key antifungal mechanism, but inhibition of virulence probably contributes to therapeutic efficacy in vivo. © The Author 2008. Published by Oxford University Press on behalf of the British Society for Antimicrobial Chemotherapy. All rights reserved.

Country of Publication: United Kingdom

Publisher: Oxford University Press (Great Clarendon Street, Oxford OX2 6DP, United Kingdom)

CAS Registry Number: 12447-40-4 (borate sodium); 1303-96-4 (borate sodium); 1330-43-4 (borate sodium); 1333-73-9 (borate sodium); 32446-62-1 (borate sodium); 61028-24-8 (borate sodium); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 23637-22-1 (ergosterol); 2418-45-3 (ergosterol); 3992-98-1 (ergosterol); 57-87-4 (ergosterol)

Publication Type: Journal: Article

Subject Headings:
*antifungal activity
article
bacterial growth
bacterial viability
bacterium isolate
biofilm
*Candida albicans
concentration response
controlled study
fungal strain

fungal viability
fungus growth
fungus hyphae
fungus isolation
gene expression
in vitro study
incubation time
minimum inhibitory concentration
nonhuman
pH
*vagina candidiasis
"borate sodium/an [Drug Analysis]"
"*boric acid/an [Drug Analysis]"
"Cerebellar degeneration-related protein 1/ec [Endogenous Compound]"
"ergosterol/ec [Endogenous Compound]"
"fungal protein/ec [Endogenous Compound]"
unclassified drug

Source: EMBASE

52. Evaluation of biotyping of medically important Candida spp [Czech] Hodnoceni biotypizace lekarsky vyznamny ch kandid

Original Title: Hodnoceni biotypizace lekarsky vyznamny ch kandid

Citation: Klinicka Mikrobiologie a Infekcni Lekarstvi, 2009, vol./is. 15/4(116-124), 1211-264X (2009)

Author(s): Hamal P.; Koukalova D.

Institution: (Hamal, Koukalova) Ustav Mikrobiologie LF UP a FNOL, Hnevotinska 3, 775 15 Olomouc, Czech Republic

Language: Czech

Abstract: Background: The biotyping system according to Odds and Abbott belongs to the most frequently used phenotypic methods. The aim of the study was to evaluate its discriminatory power in our laboratory. In addition, biotypes of isolates obtained from various body locations, present in defined age groups of patients and in males and females were also compared. Material and methods: A total of 343 clinical isolates were typed belonging to six most frequent Candida spp. Nine types of tests for biotyping were prepared: sorbose, citrate and urea assimilation, tolerance to pH 1.4, pH 1.55 and higher concentration of NaCl, resistance to sodium periodate and boric acid and the ability to grow on MacConkey agar. Results: Forty-one biotypes were found among 230 C. albicans isolates, nine among 21 C. glabrata, 13 among 25 C. parapsilosis, 12 among 25 C. krusei and five biotypes among 18 C. lusitaniae isolates. Contrary to other species, all of 18 C. tropicalis isolates belonged to the same biotype. In accordance with previously published reports, high discriminatory power of the method was found with Simpson's diversity index for C. albicans reaching 0.92. On the other hand, reproducibility was relatively low; from 12 randomly chosen C. albicans isolates tested repeatedly, only two showed identical results, five differed in one test and the others in several tests. Analysis of the occurrence of individual biotypes related to different anatomical locations, age groups and sexes of patients revealed neither statistically significant variations in distribution nor predilection of any single biotype. These findings suggest that the source of infection was endogenous in most cases. In comparison with results of similar studies, marked discrepancies in profiles of predominant biotypes were found, probably due to slight differences in composition of the test media or distinctive evaluation of results; however, it may reflect also geographical specificity of isolates. Conclusion: It can be concluded that the main advantages of the Odds biotyping system are high discriminatory power and cost-effectiveness. On the other hand, discrepancies in reproducibility of results as well as relatively long period for preparation of test media and for achieving of results decline its usefulness for epidemiological studies.

Country of Publication: Czech Republic

Publisher: Trios spol. s.r.o. (Zakourilova 142, Praha 4 149 00, Czech Republic)

Publication Type: Journal: Article

Subject Headings:
article
*bacterium identification
*biotyping
*Candida albicans
Candida glabrata
Candida krusei
candida lusitaniae
Candida parapsilosis
Candida tropicalis
controlled study
female
human
major clinical study
male

Source: EMBASE

53. Antifungal mechanisms supporting boric acid therapy of Candida vaginitis.

Citation: The Journal of antimicrobial chemotherapy, Feb 2009, vol. 63, no. 2, p. 325-336, 1460-2091 (February 2009)

Author(s): De Seta, Francesco; Schmidt, Martin; Vu, Bao; Essmann, Michael; Larsen, Bryan

Abstract: Boric acid is a commonly cited treatment for recurrent and resistant yeast vaginitis, but data about the extent and mechanism of its antifungal activity are lacking. The aim of this study was to use in vitro methods to understand the spectrum and mechanism of boric acid as a potential treatment for vaginal infection. Yeast and bacterial isolates were tested by agar dilution to determine the intrinsic antimicrobial activity of boric acid. Established microbial physiology methods illuminated the mechanism of the action of boric acid against Candida albicans. C. albicans strains (including fluconazole-resistant strains) were inhibited at concentrations attainable intravaginally; as were bacteria. Broth dilution MICs were between 1563 and 6250 mg/L and boric acid proved fungistatic (also reflected by a decrease in CO(2) generation); prolonged culture at 50,000 mg/L was fungicidal. Several organic acids in yeast nitrogen broth yielded a lower pH than equimolar boric acid and sodium borate but were less inhibitory. Cold or anaerobic incubation protected yeast at high boric acid concentrations. Cells maintained integrity for 6 h in boric acid at 37 degrees C, but after 24 h modest intrusion of propidium iodide occurred; loss of plate count viability preceded uptake of vital stain. Growth at sub-MIC concentrations of boric acid decreased cellular ergosterol. The drug efflux pump CDR1 did not protect Candida as CDR1 expression was abrogated by boric acid. Boric acid interfered with the development of biofilm and hyphal transformation. Boric acid is fungistatic to fungicidal depending on concentration and temperature. Inhibition of oxidative metabolism appears to be a key antifungal mechanism, but inhibition of virulence probably contributes to therapeutic efficacy in vivo.

Subject Headings:
Ergosterol
Candida albicans
Humans
Candidiasis Vulvovaginal
Antifungal Agents
Colony Count Microbial
Microbial Sensitivity Tests
Microbial Viability
Female
Boric Acids
Index Medicus
Bacteria

Source: Medline

54. Recurrent vaginal infections. Candidosis, bacterial vaginosis [German] Rezidivierende vaginalinfektionen : Candidose, bakterielle vaginose

Original Title: Rezidivierende vaginalinfektionen : Candidose, bakterielle vaginose

Citation: Gynakologe, October 2009, vol./is. 42/10(766-771), 0017-5994 (October 2009)

Author(s): Mendling W.

Institution: (Mendling) Vivantes-Frauenkliniken im Friedrichshain und Am Urban, Landsberger Allee 49, 10249 Berlin, Germany

Language: German

Abstract: Chronic recurrent vulvovaginal candidosis (CRVVC) is caused by Candida albicans in 90% of cases with regional differences. Non-albicans species are more frequent in patients with immunodepression or diabetes mellitus. CRVVC is influenced by immunosuppression, gene polymorphisms, allergic factors, serum glucose levels, antibiotics, psychosocial stress and estrogen-induced vaginal factors. Therapy of CRVVC and of non-albicans vaginitis is difficult. Resistance of C. albicans seems to be clinically unimportant. Because CRVVC cannot yet be treated immunologically, a degressive oral therapy with 200 mg fluconazole is recommended. Boric acid or flucytosine is recommended in some countries against C. glabrata vaginitis. In Germany 800 mg posaconazole/day for 15 days is recently recommended together with local cyclopyroxolamine. C. krusei is resistant to triazoles, but can be treated with local antimycotics. Future studies should include a candida autovaccination or antibodies against candida virulence factors. Patient self-therapy is often incorrect. In patients with bacterial vaginosis (BV) there is an adherent bacterial biofilm consisting mainly of Gardnerella (G.) vaginalis and Atopobium (A.) vaginae. About 60% of the patients suffer from recurrences after a standard therapy with metronidazole or clindamycine due to persistence of the biofilm. Epithelial cells in the urine of women with BV and their partners are the same bacterial biofilms as in the vagina. Thus BV seems to be a sexually transmitted disease. This bacterial biofilm cannot at present be eradicated with medications. Certain strains of vaginal or oral lactobacilli or improvement of vaginal pH-values reduce recurrences after standard treatment. © 2009 Springer Medizin Verlag.

Country of Publication: Germany

Publisher: Springer Verlag (Tiergartenstrasse 17, Heidelberg D-69121, Germany)

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 41621-49-2 (ciclopiroxolamine); 18323-44-9 (clindamycin); 86386-73-4 (fluconazole); 2022-85-7 (flucytosine); 50-99-7 (glucose); 84778-64-3 (glucose); 39322-38-8 (metronidazole); 443-48-1 (metronidazole); 171228-49-2 (posaconazole)

Publication Type: Journal: Review

Subject Headings:
antibiotic resistance
Candida albicans
DNA polymorphism
human
mental stress
*recurrent infection
review
"*vagina candidiasis/dt [Drug Therapy]"
vaginitis
"boric acid/dt [Drug Therapy]"
"ciclopiroxolamine/cb [Drug Combination]"
"ciclopiroxolamine/dt [Drug Therapy]"
"clindamycin/dt [Drug Therapy]"
"fluconazole/dt [Drug Therapy]"
"fluconazole/po [Oral Drug Administration]"
"flucytosine/dt [Drug Therapy]"
glucose

"metronidazole/dt [Drug Therapy]"
"posaconazole/cb [Drug Combination]"
"posaconazole/dt [Drug Therapy]"

Source: EMBASE

Full Text: Available from *Springer NHS Pilot 2014 (NESLi2)* in *Der Gynäkologe*; Note: ; Collection notes: Academic-License. Please when asked to pick an institution please pick NHS. Please also note access is from 1997 to date only.

55. Azole resistant Candida glabrata vulvovaginitis treated with boric acid

Citation: European Journal of Obstetrics Gynecology and Reproductive Biology, November 2009, vol./is. 147/1(112), 0301-2115 (November 2009)

Author(s): Savini V.; Catavitello C.; Bianco A.; Balbinot A.; D'Antonio F.; D'Antonio D.

Institution: (Savini, Catavitello, Bianco, Balbinot, D'Antonio) Clinical Microbiology and Virology Unit, Department of Transfusion Medicine, 'Spirito Santo' Hospital, via Fonte Romana 8, CAP 65100, Pescara (Pe), Italy; (D'Antonio) Department of Gynecology, 'SS. Annunziata' Hospital, Chieti, Italy

Language: English

Country of Publication: Ireland

Publisher: Elsevier Ireland Ltd (P.O. Box 85, Limerick, Ireland)

CAS Registry Number: 74469-00-4 (amoxicillin plus clavulanic acid); 79198-29-1 (amoxicillin plus clavulanic acid); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 86386-73-4 (fluconazole); 84625-61-6 (itraconazole); 22916-47-8 (miconazole); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin); 109-97-7 (pyrrole)

Publication Type: Journal: Letter

Subject Headings:
adult
anamnesis
antibiotic resistance
Candida glabrata
case report
clinical feature
female
human
letter
priority journal
"tonsillitis/dt [Drug Therapy]"
*vagina candidiasis
"vulvovaginitis/dt [Drug Therapy]"
"amoxicillin plus clavulanic acid/dt [Drug Therapy]"
"boric acid/dt [Drug Therapy]"
"boric acid/va [Intravaginal Drug Administration]"
"fluconazole/dt [Drug Therapy]"
"fluconazole/po [Oral Drug Administration]"
"itraconazole/dt [Drug Therapy]"
"miconazole/tp [Topical Drug Administration]"
nystatin
pyrrole

Source: EMBASE

Full Text: Available from *Elsevier* in *European Journal of Obstetrics and Gynecology and Reproductive Biology*

56. Boric acid addition to suppressive antimicrobial therapy for recurrent bacterial vaginosis.

Citation: Sexually transmitted diseases, Nov 2009, vol. 36, no. 11, p. 732-734, 1537-4521 (November 2009)

Author(s): Reichman, Orna; Akins, Robert; Sobel, Jack D

Abstract: Recurrent bacterial vaginosis (RBV) is extremely common and a source of frustration to patient and practitioners alike. In the absence of curative therapy, practitioners resort to retreating each individual episode. It has been suggested that vaginal biofilm in BV facilitates persistence of bacterial pathogens. Accordingly, topical boric acid (BA) aimed at biofilm removal was added to nitroimidazole induction and maintenance therapy creating a triple phase regimen to reduce symptomatic recurrence of BV in high-risk patients. Uncontrolled, nonrandomized, retrospective chart review of patients with RBV treated with 7 days of oral nitroimidazole; followed by 21 days of intravaginal BA 600 mg/day and if in remission treated with metronidazole gel twice weekly for 16 weeks. Outcome was determined using Amsel criteria. Fifty-eight women were treated for a total of 77 episodes of RBV. Sixty episodes of BV were available for a follow-up evaluation 4 to 12 weeks after enrollment, having completed both nitroimidazole and BA therapy and before initiating vaginal metronidazole gel. Cure after nitroimidazole and BA therapy ranged from 88% to 92%, 7 and 12 weeks after the initial visit, respectively. Cumulative cure at 12, 16, and 28 weeks from initial visit was 87%, 78%, and 65%, respectively. A failure rate of 50% was documented by 36 weeks of follow-up. No adverse effects of BA were observed. Clinical experience with a triple phase maintenance regimen for women with RBV was encouraging but requires validation in a prospective randomized controlled study.

Subject Headings:
Administration Intravaginal
Drug Administration Schedule
Administration Oral
Index Medicus
Humans
Secondary Prevention
Retrospective Studies
Metronidazole
Treatment Failure
Adult
Female
Anti-Bacterial Agents
Boric Acids
Treatment Outcome
Drug Therapy Combination
Vaginosis Bacterial
Follow-Up Studies
Nitroimidazoles

Source: Medline

57. Azole resistant Candida glabrata vulvovaginitis treated with boric acid.

Citation: European journal of obstetrics, gynecology, and reproductive biology, Nov 2009, vol. 147, no. 1, p. 112., 1872-7654 (November 2009)

Author(s): Savini, Vincenzo; Catavitello, Chiara; Bianco, Azaira; Balbinot, Andrea; D'Antonio, Francesco; D'Antonio, Domenico

Subject Headings:
Treatment Outcome
Humans
Insecticides
Antifungal Agents
Candidiasis
Vulvovaginitis
Index Medicus
Adult
Female

Itraconazole
Boric Acids
Fluconazole
Drug Resistance Fungal
Candida glabrata

Source: Medline

Full Text: Available from *Elsevier* in *European Journal of Obstetrics and Gynecology and Reproductive Biology*

58. Candidiasis (vulvovaginal).

Citation: BMJ clinical evidence, Jan 2010, vol. 2010, 1752-8526 (2010)

Author(s): Spence, Des

Abstract: Vulvovaginal candidiasis is estimated to be the second most common cause of vaginitis after bacterial vaginosis. Candida albicans accounts for 85% to 90% of cases. We conducted a systematic review and aimed to answer the following clinical questions: What are the effects of drug treatments for acute vulvovaginal candidiasis in non-pregnant symptomatic women? What are the effects of alternative or complementary treatments for acute vulvovaginal candidiasis in non-pregnant symptomatic women? What are the effects of treating a male sexual partner to resolve symptoms and prevent recurrence in non-pregnant women with symptomatic acute vulvovaginal candidiasis? What are the effects of alternative or complementary treatments for symptomatic recurrent vulvovaginal candidiasis in non-pregnant women? What are the effects of treating a male sexual partner in non-pregnant women with symptomatic recurrent vulvovaginal candidiasis? What are the effects of treating asymptomatic non-pregnant women with a positive swab for candidiasis? We searched: Medline, Embase, The Cochrane Library, and other important databases up to March 2009 (Clinical Evidence reviews are updated periodically; please check our website for the most up-to-date version of this review). We included harms alerts from relevant organisations such as the US Food and Drug Administration (FDA) and the UK Medicines and Healthcare products Regulatory Agency (MHRA). We found 61 systematic reviews, RCTs, or observational studies that met our inclusion criteria. We performed a GRADE evaluation of the quality of evidence for interventions. In this systematic review, we present information relating to the effectiveness and safety of the following interventions: alternative or complementary treatments; douching; drug treatments; garlic; intravaginal preparations (boric acid, nystatin, imidazoles, tea tree oil); oral fluconazole; oral itraconazole; treating a male sexual partner; and yoghurt containing Lactobacillus acidophilus (oral or vaginal).

Subject Headings:
Candida albicans
Vaginosis Bacterial
Administration Oral
Candidiasis Vulvovaginal
Humans
Index Medicus
Itraconazole
Fluconazole
Acute Disease
Evidence-Based Medicine

Source: Medline

Full Text: Available from *National Library of Medicine* in *Clinical Evidence*
Available from *National Library of Medicine* in *BMJ Clinical Evidence*

59. Management of recurrent vulvo-vaginal candidosis as a chronic illness.

Citation: Gynecologic and obstetric investigation, Jan 2010, vol. 70, no. 4, p. 306-321, 1423-002X (2010)

Author(s): Donders, Gilbert G G; Bellen, Gert; Mendling, Werner

Abstract: For sporadic acute Candida vaginitis, any oral or local antifungal therapy can be used. For women with recurrent vulvo-vaginal candidosis (RVC), on the other hand, such simple approaches are insufficient, regardless of the product chosen. Instead, RVC should be managed as any other chronic disease and requires long-term, prophylactic, suppressive antifungal treatment. A regimen using individualized, decreasing doses of oral fluconazole (the ReCiDiF regimen) was proven to be highly efficient and offered great comfort to the patients. During this regimen, it is crucial that patients are carefully examined by anamnestic, clinical, microscopic and culture-proven absence of Candida. If a relapse occurs, the medication is adjusted and efforts are taken to find a possible triggering factor for the reactivation of the infection. Care has to be taken not to accumulate 'don't do's', unless the efficiency of a measure has been proven, by trying to eliminate one risk factor at a time for 2 months. Known possible triggers to be kept in mind are (1) antibiotic use, (2) use of specific contraceptives, especially combined contraceptive pills, (3) disturbed glucose metabolism, (4) the use of personal hygienic products, and (5) tight clothing or plastic panty liners. In therapy-resistant cases, non-albicans infection must be ruled out, and alternative therapies should be tried. Boric acid is proven to be efficient in most of these resistant cases, but other non-azoles like amphotericin B, flucytosine, gentian violet, and even caspofungin may have to be tried. As a final remark it has to be said that many patients feel poorly understood and inefficiently managed by many care-givers, increasing their feelings of guilt and sexual inferiority. Therefore, attention has to be given to take the disease seriously, follow strict treatment regimens, and advise precisely and based on individual evidence concerning any possible risk factors for recurrence. In case of therapy-resistant vulvo-vaginitis, reconsider your diagnosis and/or consider referral to specialized therapists. Copyright © 2010 S. Karger AG, Basel.

Subject Headings:
Vulva
Contraceptive Agents Female
Candidiasis Vulvovaginal
Humans
Female
Clothing
Genotype
Candida albicans
Diagnosis Differential
Recurrence
Vagina
Drug Resistance Fungal
Immunity
Antifungal Agents
Feminine Hygiene Products
Genetic Predisposition to Disease
Candida
Dietary Carbohydrates
Sexual Behavior
Hydrogen-Ion Concentration
Saliva
Index Medicus
Sexually Transmitted Diseases
Male
Chronic Disease

Source: Medline

Full Text: Available from *S. Karger AG* in *Gynecologic and Obstetric Investigation*; Note: ; Collection notes: Academic-License: Only available from an NHS networked computer
Available from *ProQuest* in *Gynecologic and Obstetric Investigation*
Available from *EBSCOhost* in *Gynecologic & Obstetric Investigation*

60. Candidiasis (vulvovaginal)

Citation: BMJ clinical evidence, 2010, vol./is. 2010/(no pagination), 1752-8526 (2010)

Author(s): Spence D.

Institution: (Spence) General Practice, Glasgow University, Glasgow, Scotland

Language: English

Abstract: INTRODUCTION: Vulvovaginal candidiasis is estimated to be the second most common cause of vaginitis after bacterial vaginosis. Candida albicans accounts for 85% to 90% of cases.METHODS AND OUTCOMES: We conducted a systematic review and aimed to answer the following clinical questions: What are the effects of drug treatments for acute vulvovaginal candidiasis in non-pregnant symptomatic women? What are the effects of alternative or complementary treatments for acute vulvovaginal candidiasis in non-pregnant symptomatic women? What are the effects of treating a male sexual partner to resolve symptoms and prevent recurrence in non-pregnant women with symptomatic acute vulvovaginal candidiasis? What are the effects of alternative or complementary treatments for symptomatic recurrent vulvovaginal candidiasis in non-pregnant women? What are the effects of treating a male sexual partner in non-pregnant women with symptomatic recurrent vulvovaginal candidiasis? What are the effects of treating asymptomatic non-pregnant women with a positive swab for candidiasis? We searched: Medline, Embase, The Cochrane Library, and other important databases up to March 2009 (Clinical Evidence reviews are updated periodically; please check our website for the most up-to-date version of this review). We included harms alerts from relevant organisations such as the US Food and Drug Administration (FDA) and the UK Medicines and Healthcare products Regulatory Agency (MHRA).RESULTS: We found 61 systematic reviews, RCTs, or observational studies that met our inclusion criteria. We performed a GRADE evaluation of the quality of evidence for interventions.CONCLUSIONS: In this systematic review, we present information relating to the effectiveness and safety of the following interventions: alternative or complementary treatments; douching; drug treatments; garlic; intravaginal preparations (boric acid, nystatin, imidazoles, tea tree oil); oral fluconazole; oral itraconazole; treating a male sexual partner; and yoghurt containing Lactobacillus acidophilus (oral or vaginal).

Country of Publication: United Kingdom

CAS Registry Number: 86386-73-4 (fluconazole); 84625-61-6 (itraconazole)

Publication Type: Journal: Review

Subject Headings:
acute disease
Candida albicans
"*Candidiasis Vulvovaginal/di [Diagnosis]"
evidence based medicine
human
oral drug administration
vaginitis
"*fluconazole/ad [Drug Administration]"
"itraconazole/dt [Drug Therapy]"

Source: EMBASE

Full Text: Available from *National Library of Medicine* in *Clinical Evidence*
Available from *National Library of Medicine* in *BMJ Clinical Evidence*

61. Antifungal activity of chemical agents against Candida albicans

Citation: Journal of Hospital Infection, October 2010, vol./is. 76/(S23), 0195-6701 (October 2010)

Author(s): Silva A.P.; Figueiredo S.; Lisboa C.; Rocha R.; Pina-Vaz C.; Rodrigues A.G.

Institution: (Silva, Figueiredo, Lisboa, Rocha, Pina-Vaz, Rodrigues) Microbiology Department, Faculty of Medicine, Portugal

Language: English

Abstract: Hospital reservoirs of Candida organisms may include not only human endogenous sources, but also environmental and the hands of health care personnel. The activity of several chemical germicides commonly used to disinfect surfaces, medical devices, as

well as hands or wound lesions was assessed regarding Candida species. Ten strains of each C. albicans, C. parapsilosis, C. glabrata, C. tropicalis, C. krusei and C. guilliermondii were used. Chlorhexidine (C), ethanol (E), sodium hypochlorite (SH), hydrogen peroxide (HP), potassiumpermanganate (PP), boric acid (BA) and cerium nitrate (CN) were studied. The minimal inhibitory concentration (MIC) and minimal lethal concentration (MLC) of each chemical agent was assessedaccording to the CLSI M27-A3 protocol. Additionally, the growth inhibition potential of each agent (commercial solutions) was determined following time killing assays. Flow cytometry analysisafter staining the cells with propidium iodide was performed. For all Candida strains, MIC and MLC values ranged between 0.004-0.06% for C, 1.25-10% for E, 3.125-25 ml/ml for SH, 0.03-0.12% for HP, 0.008-2 g/l for PP, 0.78-25 mg/ml for BA and 0.75-12.5mM for CN. C, E and SH inhibited 100% the growth soon after 1 min of contact. HP, PP and CN were able to inhibit 100% the growth, but only after 30 min for the first two agents and 10 min for the last. BA inhibited the growth at a maximum of 66.7%. Flow cytometry confirmed the fungicidal activity of the different chemical agents. Under the experimental conditions of the study, all solutions studied showed antifungal activity; however chlorexidine, ethanol and sodium hypochlorite revealed to be the most effective, thus supporting its use for disinfection procedures.

Conference Information: 7th International Conference of the Hospital Infection Society Liverpool United Kingdom. Conference Start: 20101010 Conference End: 20101013

Publisher: W.B. Saunders Ltd

Publication Type: Journal: Conference Abstract

Subject Headings:
*society
*antifungal activity
*Candida albicans
*hospital infection
Candida
flow cytometry
minimum inhibitory concentration
health care personnel
device
wound
species
growth inhibition
assay
staining
fungicidal activity
disinfection
hospital
human
*chemical agent
hypochlorite sodium
alcohol
hydrogen peroxide
boric acid
cerium nitrate
propidium iodide
chlorhexidine

Source: EMBASE

Full Text: Available from *UHB Online* in *Journal of Hospital Infection*
Available from *Elsevier* in *Journal of Hospital Infection*

62. Management of recurrent vulvo-vaginal candidosis as a chronic illness

Citation: Gynecologic and Obstetric Investigation, November 2010, vol./is. 70/4(306-321), 0378-7346 (November 2010)

Author(s): Donders G.G.G.; Bellen G.; Mendling W.

Institution: (Donders, Bellen) Femicare, Clinical Research for Women, Tienen, Belgium; (Donders) Departments of Obstetrics and Gynaecology, University Hospital Gasthuisberg Leuven, Leuven, Belgium; (Donders) University Hospital Gasthuisberg Leuven, Leuven, Belgium; (Donders) General Hospital Heilig Hart, Tienen, Belgium; (Donders) University Hospital Citadelle Liege, Liege, Belgium; (Mendling) Klinik fur Gynakologie und Geburtsmedizin, Vivantes-Klinika im Friedrichshain und am Urban, Berlin, Germany

Language: English

Abstract: For sporadic acute Candida vaginitis, any oral or local antifungal therapy can be used. For women with recurrent vulvo-vaginal candidosis (RVC), on the other hand, such simple approaches are insufficient, regardless of the product chosen. Instead, RVC should be managed as any other chronic disease and requires long-term, prophylactic, suppressive antifungal treatment. A regimen using individualized, decreasing doses of oral fluconazole (the ReCiDiF regimen) was proven to be highly efficient and offered great comfort to the patients. During this regimen, it is crucial that patients are carefully examined by anamnestic, clinical, microscopic and culture-proven absence of Candida. If a relapse occurs, the medication is adjusted and efforts are taken to find a possible triggering factor for the reactivation of the infection. Care has to be taken not to accumulate 'don't do's', unless the efficiency of a measure has been proven, by trying to eliminate one risk factor at a time for 2 months. Known possible triggers to be kept in mind are (1) antibiotic use, (2) use of specific contraceptives, especially combined contraceptive pills, (3) disturbed glucose metabolism, (4) the use of personal hygienic products, and (5) tight clothing or plastic panty liners. In therapy-resistant cases, non-albicans infection must be ruled out, and alternative therapies should be tried. Boric acid is proven to be efficient in most of these resistant cases, but other non-azoles like amphotericin B, flucytosine, gentian violet, and even caspofungin may have to be tried. As a final remark it has to be said that many patients feel poorly understood and inefficiently managed by many care-givers, increasing their feelings of guilt and sexual inferiority. Therefore, attention has to be given to take the disease seriously, follow strict treatment regimens, and advise precisely and based on individual evidence concerning any possible risk factors for recurrence. In case of therapy-resistant vulvo-vaginitis, reconsider your diagnosis and/or consider referral to specialized therapists. Copyright © 2010 S. Karger AG, Basel.

Country of Publication: Switzerland

Publisher: S. Karger AG (Allschwilerstrasse 10, P.O. Box, Basel CH-4009, Switzerland)

CAS Registry Number: 1397-89-3 (amphotericin B); 30652-87-0 (amphotericin B); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 189768-38-5 (caspofungin); 467-63-0 (crystal violet); 548-62-9 (crystal violet); 24169-02-6 (econazole); 27220-47-9 (econazole); 86386-73-4 (fluconazole); 2022-85-7 (flucytosine); 84625-61-6 (itraconazole); 65277-42-1 (ketoconazole); 11121-32-7 (mepartricin); 62534-68-3 (mepartricin); 62534-69-4 (mepartricin); 22916-47-8 (miconazole); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin); 67915-31-5 (terconazole); 137234-62-9 (voriconazole)

Publication Type: Journal: Review

Subject Headings:
Candida
Candida albicans
"*candidiasis/di [Diagnosis]"
"*candidiasis/dr [Drug Resistance]"
"*candidiasis/dt [Drug Therapy]"
"*candidiasis/et [Etiology]"
caregiver
chronic disease
clinical trial
contraception
diet
differential diagnosis
drug dose reduction
fungus culture

gene amplification
glucose metabolism
human
hygiene
immunity
"liver toxicity/si [Side Effect]"
microscopy
nonhuman
priority journal
review
risk factor
sexual behavior
single drug dose
treatment response
vagina
"*vulvovaginal disease/di [Diagnosis]"
"*vulvovaginal disease/dr [Drug Resistance]"
"*vulvovaginal disease/et [Etiology]"
"amphotericin B/dt [Drug Therapy]"
"antibiotic agent/ad [Drug Administration]"
"antibiotic agent/dt [Drug Therapy]"
"antibiotic agent/iv [Intravenous Drug Administration]"
"antibiotic agent/po [Oral Drug Administration]"
"antifungal agent/dt [Drug Therapy]"
"boric acid/dt [Drug Therapy]"
"butaconazole/dt [Drug Therapy]"
"Candida albicans vaccine/dt [Drug Therapy]"
"caspofungin/dt [Drug Therapy]"
"crystal violet/dt [Drug Therapy]"
"econazole/dt [Drug Therapy]"
"fluconazole/ct [Clinical Trial]"
"fluconazole/do [Drug Dose]"
"fluconazole/dt [Drug Therapy]"
"fluconazole/po [Oral Drug Administration]"
"flucytosine/dt [Drug Therapy]"
hormone
"itraconazole/dt [Drug Therapy]"
"itraconazole/po [Oral Drug Administration]"
"ketoconazole/ae [Adverse Drug Reaction]"
"ketoconazole/dt [Drug Therapy]"
"mepartricin/dt [Drug Therapy]"
"mepartricin/po [Oral Drug Administration]"
"miconazole/dt [Drug Therapy]"
"nystatin/dt [Drug Therapy]"
placebo
"terconazole/dt [Drug Therapy]"
unclassified drug
"voriconazole/dt [Drug Therapy]"

Source: EMBASE

Full Text: Available from *S. Karger AG* in *Gynecologic and Obstetric Investigation*; Note: ; Collection notes: Academic-License: Only available from an NHS networked computer
Available from *ProQuest* in *Gynecologic and Obstetric Investigation*
Available from *EBSCOhost* in *Gynecologic & Obstetric Investigation*

63. Candida glabrata complicating in vitro pregnancy: Successful management of subsequent pregnancy

Citation: Fertility and Sterility, February 2011, vol./is. 95/2(803.e1-803.e2), 0015-0282 (February 2011)

Author(s): Asemota O.A.; Nyirjesy P.; Fox R.; Sobel J.D.

Institution: (Asemota, Nyirjesy, Fox) Department of Obstetrics and Gynecology, Drexel University, College of Medicine, Philadelphia, PA, United States; (Sobel) Division of Infectious Diseases, Wayne State University, School of Medicine, Detroit, MI, United States

Language: English

Abstract: Objective: To report the occurrence of Candida glabrata chorioamnionitis complicating an in vitro fertilization (IVF) pregnancy. Design: Case report. Setting: University hospital. Patient(s): A 30-year-old woman, primagravida, with an IVF dichorionic-diamniotic pregnancy who presented at 15 weeks with vaginal bleeding. Intervention(s): Before embryo transfer in next IVF cycle, vaginal culture from the patient revealed colonization with C. glabrata, which was treated with boric acid. Main Outcome Measure(s): Subsequent pregnancy after eradication of fungal organisms. Result(s): The patient's first pregnancy was treated with indomethacin and broad-spectrum antibiotics, but her membranes ruptured, and she delivered both twins at 16 weeks; the autopsy and pathology reports were consistent with C. glabrata chorioamnionitis. After boric acid treatment eradicated the organisms, two embryos were transferred in subsequent IVF treatment; the second pregnancy was uncomplicated, with dichorionic- diamniotic twins, delivered by cesarean section at 38 weeks. Conclusion(s): Eradication of vaginal colonization with C. glabrata may prevent infection of the next IVF pregnancy. © 2011 American Society for Reproductive Medicine, Published by Elsevier Inc.

Country of Publication: United States

Publisher: Elsevier Inc. (360 Park Avenue South, New York NY 10010, United States)

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 53570-76-6 (cyanocobalamin); 68-19-9 (cyanocobalamin); 8064-09-3 (cyanocobalamin); 679809-58-6 (enoxaparin); 59-30-3 (folic acid); 6484-89-5 (folic acid); 53-86-1 (indometacin); 74252-25-8 (indometacin); 7681-54-1 (indometacin); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin); 12001-77-3 (pyridoxine); 58-56-0 (pyridoxine); 65-23-6 (pyridoxine); 8059-24-3 (pyridoxine)

Publication Type: Journal: Article

Subject Headings:
adult
article
autopsy
Candida glabrata
"*candidiasis/co [Complication]"
"*candidiasis/dt [Drug Therapy]"
case report
cesarean section
"*chorioamnionitis/co [Complication]"
"*chorioamnionitis/dt [Drug Therapy]"
delivery
dichorionic diamniotic pregnancy
embryo transfer
female
*fertilization in vitro
fetus wastage
fibrin deposition
gestational age
human
premature fetus membrane rupture
priority journal
spontaneous abortion
twin pregnancy
vagina bleeding
"antibiotic agent/dt [Drug Therapy]"
"boric acid/dt [Drug Therapy]"
"boric acid/va [Intravaginal Drug Administration]"
cyanocobalamin
enoxaparin

folic acid
"indometacin/dt [Drug Therapy]"
"nystatin/dt [Drug Therapy]"
pyridoxine

Source: EMBASE

Full Text: Available from *Elsevier* in *Fertility and Sterility*

64. Candida glabrata complicating in vitro pregnancy: successful management of subsequent pregnancy.

Citation: Fertility and sterility, Feb 2011, vol. 95, no. 2, p. 803.e1, 1556-5653 (February 2011)

Author(s): Asemota, Obehi A; Nyirjesy, Paul; Fox, Rachel; Sobel, Jack D

Abstract: To report the occurrence of Candida glabrata chorioamnionitis complicating an in vitro fertilization (IVF) pregnancy. Case report. University hospital. A 30-year-old woman, primagravida, with an IVF dichorionic-diamniotic pregnancy who presented at 15 weeks with vaginal bleeding. Before embryo transfer in next IVF cycle, vaginal culture from the patient revealed colonization with C. glabrata, which was treated with boric acid. Subsequent pregnancy after eradication of fungal organisms. The patient's first pregnancy was treated with indomethacin and broad-spectrum antibiotics, but her membranes ruptured, and she delivered both twins at 16 weeks; the autopsy and pathology reports were consistent with C. glabrata chorioamnionitis. After boric acid treatment eradicated the organisms, two embryos were transferred in subsequent IVF treatment; the second pregnancy was uncomplicated, with dichorionic-diamniotic twins, delivered by cesarean section at 38 weeks. Eradication of vaginal colonization with C. glabrata may prevent infection of the next IVF pregnancy. Published by Elsevier Inc.

Subject Headings:
Parity
Pregnancy Multiple
Humans
Antifungal Agents
Candidiasis
Index Medicus
Pregnancy Complications Infectious
Pregnancy
Fetal Death
Twins
Adult
Female
Boric Acids
Treatment Outcome
Candida glabrata
Fertilization in Vitro

Source: Medline

Full Text: Available from *Elsevier* in *Fertility and Sterility*

65. Boric acid for recurrent vulvovaginal candidiasis: The clinical evidence

Citation: Clinical Microbiology and Infection, May 2011, vol./is. 17/(S758), 1198-743X (May 2011)

Author(s): Iavazzo C.; Gkegkes I.; Zarkada I.; Falagas M.

Institution: (Iavazzo, Gkegkes, Zarkada, Falagas) AthensGreece

Language: English

Abstract: Objectives: Recurrent vulvovaginal candidiasis remains a challenge to manage in clinical practice. Recent epidemiological studies indicate that non-albicans Candida spp. are more resistant to conventional antifungal treatment with azoles and are considered as causative pathogens of vulvovaginal candidiasis. Methods: We searched PubMed and Scopus, for studies that reported clinical evidence on the intravaginal use of boric acid for vulvovaginal candidiasis. Results: We identified 14 studies (2 RCTs, 8 case series and 4

case reports) as eligible for inclusion in this review. In 7 studies, boric acid was compared either with nystatin, or azoles (terconazole, flucytosine, itraconazole, clotrimazole, ketoconazole, fluconazole, buconazole and miconazole), while as monotherapy boric acid was studied in 7 studies. The mycological cure rates varied from 40% to 100% in patients treated with boric acid. Four of the 9 included case series reported statistically significant outcomes regarding cure (both mycological and clinical) rates. None of the included studies reported statistical significant difference in recurrence rates. Regarding the adverse effects caused by boric acid use, vaginal burning sensation (<10% of the cases), water discharge during treatment and vaginal erythema were identified in 7 studies. Conclusion: Our findings suggest that boric acid is a safe, alternative, economic option for women with recurrent and chronic symptoms of vaginitis when conventional treatment fails due to the involvement of non-albicans Candida species or azole-resistant strains.

Conference Information: 21st ECCMID/27th ICC Milan Italy. Conference Start: 20110507 Conference End: 20110510

Publisher: Blackwell Publishing Ltd

Publication Type: Journal: Conference Abstract

Subject Headings:
*vagina candidiasis
Candida
case study
human
monotherapy
female
patient
recurrence risk
adverse drug reaction
vaginal burning sensation
erythema
vaginitis
species
clinical practice
pathogenesis
Medline
case report
intravaginal drug administration
*boric acid
pyrrole derivative
fluconazole
miconazole
water
pyrrole
antifungal agent
terconazole
flucytosine
itraconazole
clotrimazole
ketoconazole
nystatin

Source: EMBASE

Full Text: Available from *EBSCOhost* in *Clinical Microbiology & Infection*

66. Boric acid for recurrent vulvovaginal candidiasis: the clinical evidence.

Citation: Journal of women's health (2002), Aug 2011, vol. 20, no. 8, p. 1245-1255, 1931-843X (August 2011)

Author(s): Iavazzo, Christos; Gkegkes, Ioannis D; Zarkada, Ioanna M; Falagas, Matthew E

Abstract: Recurrent vulvovaginal candidiasis (VVC) remains a challenge to manage in clinical practice. Recent epidemiologic studies indicate that non-albicans Candida spp. are more resistant to conventional antifungal treatment with azoles and are considered as causative pathogens of vulvovaginal candidiasis. We searched PubMed and Scopus for studies that reported clinical evidence on the intravaginal use of boric acid for vulvovaginal candidiasis. We identified 14 studies (2 randomized clinical trials [RCTs], 9 case series, and 4 case reports) as eligible for inclusion in this review. Boric acid was compared with nystatin, terconazole, flucytosine, itraconazole, clotrimazole, ketoconazole, fluconazole, buconazole, and miconazole; as monotherapy, boric acid was studied in 7 studies. The mycologic cure rates varied from 40% to 100% in patients treated with boric acid; 4 of the 9 included case series reported statistically significant outcomes regarding cure (both mycologic and clinical) rates. None of the included studies reported statistically significant differences in recurrence rates. Regarding the adverse effects caused by boric acid use, vaginal burning sensation (<10% of cases), water discharge during treatment, and vaginal erythema were identified in 7 studies. Our findings suggest that boric acid is a safe, alternative, economic option for women with recurrent and chronic symptoms of vaginitis when conventional treatment fails because of the involvement of non-albicans Candida spp. or azole-resistant strains.

Subject Headings:
Case-Control Studies
Administration Intravaginal
Randomized Controlled Trials as Topic
Flucytosine
Candidiasis Vulvovaginal
Antifungal Agents
Vaginal Diseases
Secondary Prevention
Index Medicus
Humans
Anti-Infective Agents Local
Treatment Outcome
Female
Biological Availability
Boric Acids
Candida
Azoles
Suppositories
Drug Resistance Multiple Fungal

Source: Medline

Full Text: Available from *EBSCOhost* in *Journal of Women's Health (15409996)*

67. Boric acid for recurrent vulvovaginal candidiasis: The clinical evidence

Citation: Journal of Women's Health, August 2011, vol./is. 20/8(1245-1255), 1540-9996;1931-843X (01 Aug 2011)

Author(s): Iavazzo C.; Gkegkes I.D.; Zarkada I.M.; Falagas M.E.

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Language: English

Abstract: Background: Recurrent vulvovaginal candidiasis (VVC) remains a challenge to manage in clinical practice. Recent epidemiologic studies indicate that non-albicans Candida spp. are more resistant to conventional antifungal treatment with azoles and are considered as causative pathogens of vulvovaginal candidiasis. Methods: We searched PubMed and Scopus for studies that reported clinical evidence on the intravaginal use of boric acid for vulvovaginal candidiasis. Results: We identified 14 studies (2 randomized clinical trials [RCTs], 9 case series, and 4 case reports) as eligible for inclusion in this review. Boric

acid was compared with nystatin, terconazole, flucytosine, itraconazole, clotrimazole, ketoconazole, fluconazole, buconazole, and miconazole; as monotherapy, boric acid was studied in 7 studies. The mycologic cure rates varied from 40% to 100% in patients treated with boric acid; 4 of the 9 included case series reported statistically significant outcomes regarding cure (both mycologic and clinical) rates. None of the included studies reported statistically significant differences in recurrence rates. Regarding the adverse effects caused by boric acid use, vaginal burning sensation (<10% of cases), water discharge during treatment, and vaginal erythema were identified in 7 studies. Conclusions: Our findings suggest that boric acid is a safe, alternative, economic option for women with recurrent and chronic symptoms of vaginitis when conventional treatment fails because of the involvement of non-albicans Candida spp. or azole-resistant strains. © Copyright 2011, Mary Ann Liebert, Inc.

Country of Publication: United States

Publisher: Mary Ann Liebert Inc. (140 Huguenot Street, New Rochelle NY 10801-5215, United States)

CAS Registry Number: 12633-72-6 (amphotericin); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 64872-76-0 (butoconazole); 64872-77-1 (butoconazole); 23593-75-1 (clotrimazole); 467-63-0 (crystal violet); 548-62-9 (crystal violet); 86386-73-4 (fluconazole); 2022-85-7 (flucytosine); 84625-61-6 (itraconazole); 65277-42-1 (ketoconazole); 22916-47-8 (miconazole); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin); 67915-31-5 (terconazole)

Publication Type: Journal: Review

Subject Headings:
Candida
"erythema/si [Side Effect]"
fungal strain
human
monotherapy
mycology
priority journal
randomized controlled trial (topic)
recurrent disease
review
single drug dose
systematic review
treatment outcome
"*vagina candidiasis/dt [Drug Therapy]"
"vagina discharge/si [Side Effect]"
"vaginal burning sensation/si [Side Effect]"
"vaginal erythema/si [Side Effect]"
yeast
"amphotericin/cb [Drug Combination]"
"amphotericin/dt [Drug Therapy]"
"amphotericin/tp [Topical Drug Administration]"
"*boric acid/ae [Adverse Drug Reaction]"
"*boric acid/cm [Drug Comparison]"
"*boric acid/dt [Drug Therapy]"
"*boric acid/va [Intravaginal Drug Administration]"
"butoconazole/cm [Drug Comparison]"
"butoconazole/dt [Drug Therapy]"
"butoconazole/va [Intravaginal Drug Administration]"
"clotrimazole/cm [Drug Comparison]"
"clotrimazole/dt [Drug Therapy]"
"crystal violet/dt [Drug Therapy]"
"crystal violet/tp [Topical Drug Administration]"
"fluconazole/cm [Drug Comparison]"
"fluconazole/dt [Drug Therapy]"
"fluconazole/po [Oral Drug Administration]"
"flucytosine/cb [Drug Combination]"

"flucytosine/cm [Drug Comparison]"
"flucytosine/dt [Drug Therapy]"
"flucytosine/va [Intravaginal Drug Administration]"
"flucytosine/tp [Topical Drug Administration]"
"itraconazole/cm [Drug Comparison]"
"itraconazole/dt [Drug Therapy]"
"ketoconazole/cm [Drug Comparison]"
"ketoconazole/dt [Drug Therapy]"
"miconazole/cm [Drug Comparison]"
"miconazole/dt [Drug Therapy]"
"miconazole/va [Intravaginal Drug Administration]"
"nystatin/cm [Drug Comparison]"
"nystatin/dt [Drug Therapy]"
"nystatin/tp [Topical Drug Administration]"
"terconazole/cm [Drug Comparison]"
"terconazole/dt [Drug Therapy]"
"terconazole/va [Intravaginal Drug Administration]"

Source: EMBASE

Full Text: Available from *EBSCOhost* in *Journal of Women's Health (15409996)*

68. Impact of platinum on the soil invertebrate Folsomia candida

Citation: Neuroendocrinology Letters, 2012, vol./is. 33/SUPPL. 3(173-178), 0172-780X (2012)

Author(s): Nemcova B.; Bednarova I.; Mikulaskova H.; Beklova M.

Institution: (Nemcova, Bednarova, Mikulaskova, Beklova) Department of Veterinary Ecology and Environmental Protection, Faculty of Veterinary Hygiene and Ecology, University of Veterinary and Pharmaceutical Sciences Brno, Palackeho 1/3, CZ-612 42 Brno, Czech Republic

Language: English

Abstract: OBJECTIVES: Regarding the environmental pollution, platinum group elements (PGE) are in the centre of interest of current research. These rare elements are used as effective substances in automotive catalysts to reduce pollution by emissions originating from fuel combustion. Due to their harmful potential, it is necessary to monitor their content and behaviour in different samples. Comprehensive studies on PGE behaviour and effects are still lacking. Their distribution in the food chain and data on bioaccumulation has not been described so far. METHODS: We focused on reproductive effects of platinum (PtCl<inf>4</inf>), in particular. Our study is based on a collembolan laboratory breed, test optimalization and validation according to the OECD 232 standards [CSN ISO 11267 - Soil quality - Inhibition of reproduction of Collembola (Folsomia candida) by soil pollutants]. The concentrations of PtCl<inf>4</inf> tested were as follows: 5, 10, 25, 50 and 100 muM. The EC<inf>50</inf> was determined after 28 days of testing. RESULTS: The results were evaluated using the inhibition of reproduction compared with controls. The EC<inf>50</inf> was determined after the 28-day test. The value of 28dEC<inf>50</inf> of the boric acid test was estimated at 120 mg/kg and the measured 28dEC<inf>50</inf> of PtCl<inf>4</inf> was 200.4 muM. CONCLUSION: The presented data can be considered as a step forward in the assessment of the potential risk of platinum in the terrestrial environment. However, more toxicity data for various species are needed to evaluate the environmental risk of platinum in soils. © 2012 Neuroendocrinology Letters.

Country of Publication: Sweden

Publisher: Maghira and Maas Publications (P.O. Box 26132, Stockholm S-100 41, Sweden)

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 7440-06-4 (platinum)

Publication Type: Journal: Article

Subject Headings: article
breed

controlled study
*Folsomia candida
laboratory
nonhuman
process optimization
reproduction
soil pollutant
*soil quality
standard
validation process
boric acid
*platinum

Source: EMBASE

69. Symptomatic Trichomonas vaginalis infection in the setting of severe nitroimidazole allergy: Successful treatment with boric acid

Citation: Sexual Health, 2012, vol./is. 9/4(389-391), 1448-5028;1449-8987 (2012)

Author(s): Muzny C.; Barnes A.; Mena L.

Institution: (Muzny) Division of Infectious Diseases, University of Alabama at Birmingham, ZRB 242, 1530 3rd Avenue South, Birmingham, AL 35294, United States; (Barnes, Mena) Division of Infectious Diseases, University of Mississippi, Medical Center, 2500 North State Street, Jackson, MS 2500, United States

Language: English

Abstract: This report describes a patient with symptomatic Trichomonas vaginalis infection who was unable to tolerate nitroimidazole drugs because of severe hypersensitivity, for which desensitisation was not possible. Use of intravaginal clotrimazole, intravaginal paromomycin, intravaginal furazolidone, povidoneiodine douches, and oral nitazoxanide were unsuccessful in eradicating the patient's T. vaginalis infection. A 2-month course of intravaginal topical boric acid subsequently achieved a complete symptomatic cure and the patient remained T. vaginalis wet prep- and culture-negative 60 days after treatment. © 2012 CSIRO.

Country of Publication: Australia

Publisher: CSIRO (P.O. Box 1139, Collingwood VIC 3066, Australia)

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 18323-44-9 (clindamycin); 23593-75-1 (clotrimazole); 67-45-8 (furazolidone); 39322-38-8 (metronidazole); 443-48-1 (metronidazole); 55981-09-4 (nitazoxanide); 11035-13-5 (paromomycin); 1263-89-4 (paromomycin); 1390-73-4 (paromomycin); 51795-47-2 (paromomycin); 54597-56-7 (paromomycin); 7542-37-2 (paromomycin); 84420-34-8 (paromomycin); 25655-41-8 (povidone iodine)

Publication Type: Journal: Article

Subject Headings:
adult
article
case report
disease severity
"*drug hypersensitivity/si [Side Effect]"
female
follow up
human
hypertension
kidney failure
non insulin dependent diabetes mellitus
nonhuman
sexual behavior
sexuality
treatment duration

treatment outcome
"*trichomoniasis/dt [Drug Therapy]"
vagina discharge
vaginal burning sensation
vaginal pruritus
"*boric acid/dt [Drug Therapy]"
"*boric acid/va [Intravaginal Drug Administration]"
"*boric acid/tp [Topical Drug Administration]"
"clindamycin/dt [Drug Therapy]"
"clindamycin/po [Oral Drug Administration]"
"clotrimazole/dt [Drug Therapy]"
"clotrimazole/va [Intravaginal Drug Administration]"
"clotrimazole/tp [Topical Drug Administration]"
"furazolidone/dt [Drug Therapy]"
"furazolidone/va [Intravaginal Drug Administration]"
"*metronidazole/ae [Adverse Drug Reaction]"
"*metronidazole/dt [Drug Therapy]"
"nitazoxanide/dt [Drug Therapy]"
"nitazoxanide/po [Oral Drug Administration]"
"paromomycin/dt [Drug Therapy]"
"paromomycin/va [Intravaginal Drug Administration]"
"povidone iodine/dt [Drug Therapy]"

Source: EMBASE

70. Yeast vaginitis during pregnancy: Susceptibility testing of 13 antifungal drugs and boric acid and the detection of four virulence factors

Citation: Medical Mycology, 2012, vol./is. 50/6(585-593), 1369-3786;1460-2709 (2012)

Author(s): Kalkanci A.; Guzel A.B.; Khalil I.I.J.; Aydin M.; Ilkit M.; Kustimur S.

Institution: (Kalkanci, Khalil, Aydin, Kustimur) Department of Medical Microbiology, Faculty of Medicine, University of Gazi, Ankara, Turkey; (Guzel) Department of Obstetrics and Gynecology, Faculty of Medicine, University of Cukurova, Adana, Turkey; (Ilkit) Department of Microbiology, Faculty of Medicine, University of Cukurova, Adana 01330, Turkey

Language: English

Abstract: A higher prevalence of vulvovaginal candidiasis (VVC) is seen in pregnant women compared with those who are not pregnant. Recurrence is also more common in pregnant women, and therapeutic responses are reduced. In this investigation, 207 vaginal yeast isolates recovered from pregnant women were tested for susceptibility to 13 antifungal drugs and boric acid and through these studies four virulence factors were also determined. The isolates were recovered from vaginal samples of patients with acute VVC [AVVC, (n = 73)], symptomatic recurrent VVC [RVVC, (n = 89)], asymptomatic RVVC (n = 27), and those without signs and symptoms (n = 18). Candida albicans was the most common species found (59.9%), followed by C. glabrata (19.8%), other Candida spp., (19.8%), and Saccharomyces cerevisiae (0.5%). Antifungal susceptibility testing was performed as described in CLSI document M27-A3. Additionally, we examined phospholipase and proteinase production, adhesion to vaginal epithelial cells and hemolytic activity. Notably, the MIC values of Candida spp. isolates derived from patients with VVC were no different from those of the controls (P > 0.05). In addition, Candida isolates derived from patients with AVVC or RVVC produced significantly higher amounts of phospholipase and proteinase compared with the controls (P < 0.05). Antifungal testing and the determination of virulence factors may lead to the effective and prompt treatment of VVC, particularly in pregnant women.

Country of Publication: United Kingdom

Publisher: Oxford University Press

CAS Registry Number: 1397-89-3 (amphotericin B); 30652-87-0 (amphotericin B); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 23593-75-1

(clotrimazole); 24169-02-6 (econazole); 27220-47-9 (econazole); 86386-73-4 (fluconazole); 2022-85-7 (flucytosine); 84625-61-6 (itraconazole); 65277-42-1 (ketoconazole); 22916-47-8 (miconazole); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin); 9013-93-8 (phospholipase); 9001-92-7 (proteinase); 61318-90-9 (sulconazole); 61318-91-0 (sulconazole); 91161-71-6 (terbinafine); 61675-64-7 (tioconazole); 65899-73-2 (tioconazole)

Publication Type: Journal: Article

Subject Headings:
adhesion
adult
*antifungal susceptibility
article
Candida
Candida albicans
controlled study
female
fungus isolation
hemolysis
human
major clinical study
minimum inhibitory concentration
nonhuman
*pregnancy
pregnant woman
recurrent infection
Saccharomyces cerevisiae
"*vagina candidiasis/dt [Drug Therapy]"
vagina epithelium
"amphotericin B/dt [Drug Therapy]"
"*antifungal agent/dt [Drug Therapy]"
"*boric acid/dt [Drug Therapy]"
"clotrimazole/dt [Drug Therapy]"
"econazole/dt [Drug Therapy]"
"fluconazole/dt [Drug Therapy]"
"flucytosine/dt [Drug Therapy]"
"itraconazole/dt [Drug Therapy]"
"ketoconazole/dt [Drug Therapy]"
"miconazole/dt [Drug Therapy]"
"nystatin/dt [Drug Therapy]"
"phospholipase/ec [Endogenous Compound]"
"proteinase/ec [Endogenous Compound]"
"sulconazole/dt [Drug Therapy]"
"terbinafine/dt [Drug Therapy]"
"tioconazole/dt [Drug Therapy]"
*virulence factor

Source: EMBASE

Full Text: Available from *EBSCOhost* in *Medical Mycology*

71. Boric acid as reference substance: Pros, cons and standardization

Citation: Ecotoxicology, April 2012, vol./is. 21/3(919-924), 0963-9292;1573-3017 (April 2012)

Author(s): Amorim M.J.B.; Natal-Da-Luz T.; Sousa J.P.; Loureiro S.; Becker L.; Rombke J.; Soares A.M.V.M.

Institution: (Amorim, Loureiro, Soares) Department of Biology and CESAM, University of Aveiro, Campus Universitario de Santiago, 3810-193 Aveiro, Portugal; (Natal-Da-Luz, Sousa) Department of Life Sciences, IMAR-CMA, Apartado 3046, EC Universidade de Coimbra, 3001-401 Coimbra, Portugal; (Becker) Research Centre for BioSystems, Institute of Soil Science and Soil Conservation, Justus Liebig University Giessen,

Heinrich-Buff-Ring 26, 35392 Giessen, Germany; (Rombke) ECT Oekotoxikologie GmbH, 65439 Floersheim, Germany

Language: English

Abstract: Boric acid (BA) has been successfully used as reference substance in some standard test guidelines. Due to the fact that previously selected reference substances present a significant risk to human health and/or are banned for environmental reasons, BA is being discussed for broader adoption in OECD or ISO guidelines. To provide input on BA data and contribute to the discussion on its suitability as a reference substance, in the present study BA was tested with two standard soil organisms, Enchytraeus albidus and Folsomia candida, in terms of survival, reproduction and avoidance. Additionally, published data on other organisms was analysed to derive the most sensitive soil dwelling invertebrate (hazard concentration-HC5). Results showed that BA affected the tested organisms, being two times more toxic for collembolans (LC50 = 96; EC50 = 54 mg/kg) than for enchytraeids (LC50 = 325; EC50 = 104 mg/kg). No avoidance behaviour occurred despite the fact that BA affects earthworms. Actually, it is the recommended reference substance for the earthworm avoidance test. Clearly, the suitable performance of BA in one species should not be generalized to other species. Absolute toxicity is not an important criterion for the selection of a reference substance, but it has been proposed that effects should occur within a reasonable range, i.e. <1,000 mg/kg. We could confirm, compiling previous data that for most soil invertebrates, the EC50 is expected to be below 1,000 mg/kg. From these data it could be derived that the most sensitive soil dwelling invertebrate (HC5, 50%) is likely to be affected (EC10) at 28 (8-53) mg H <inf>3</inf>BO<inf>3</inf>/Kg, equivalent to 4.6 (1.4-8.7) mg boron/kg. © 2011 Springer Science+Business Media, LLC.

Country of Publication: Netherlands

Publisher: Springer Netherlands (Van Godewijckstraat 30, Dordrecht 3311 GZ, Netherlands)

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid)

Publication Type: Journal: Article

Subject Headings:
article
avoidance behavior
Collembola
controlled study
dose response
earthworm
Enchyraeus albidus
Folsomia candida
microorganism
nonhuman
priority journal
reproduction
risk factor
*standardization
survival
toxicity testing
*boric acid

Source: EMBASE

Full Text: Available from *Springer NHS Pilot 2014 (NESLi2)* in *Ecotoxicology*; Note: ; Collection notes: Academic-License. Please when asked to pick an institution please pick NHS. Please also note access is from 1997 to date only.
Available from *ProQuest* in *Ecotoxicology*

72. Rapid separations of nile blue stained microorganisms as cationic charged species by chip-CE with LIF

Citation: Electrophoresis, May 2012, vol./is. 33/9-10(1421-1426), 0173-0835;1522-2683 (May 2012)

Author(s): Nuchtavorn N.; Bek F.; Macka M.; Suntornsuk W.; Suntornsuk L.

Institution: (Nuchtavorn, Suntornsuk) Department of Pharmaceutical Chemistry, Faculty of Pharmacy Mahidol University, Bangkok, Thailand; (Bek) Agilent Technologies, Waldbronn, Germany; (Macka) Australian Centre for Research on Separation Science, School of Chemistry, University of Tasmania, Tasmania, Australia; (Suntornsuk) Department of Microbiology, Faculty of Science, King Mongkut's University of Technology, Thonburi, Bangkok, Thailand

Language: English

Abstract: Rapid detection of microorganisms by alternative methods is desirable. Electromigration separation methods have the capability to separate microorganisms according to their charge and size and laser-induced fluorescence (LIF) detection have single-cell detection capability. In this work, a new combined separation and detection scheme was introduced using chip-based capillary electrophoresis (chip-CE) platform with LIF detection. Three microorganisms Escherichia coli, Staphylococcus aureus, and Candida albicans were selected as representatives of Gram-positive bacteria, Gram-negative bacteria, and fungi. While their cells carry an overall negative charge in neutral to alkaline pH, staining them with nile blue (NB) provided highly sensitive LIF detection with excitation and emission wavelengths at 635 nm and 685 nm, respectively, and at the same time, the overall charge was converted to positive. Electrolyte pH and concentration of polyethylene oxide (PEO) significantly affected the resolution of the microorganisms. Their optimal separation in the 14 mm separation channel was achieved in less than 30 s (R<inf>s</inf> > 5.3) in an electrolyte consisting of 3.94 mM Tris, 0.56 mM boric acid, 0.013 mM ethylenediaminetetraacetic acid disodium salt dihydrate (pH 10.5), and 0.025% PEO, with injection/separation voltages of +1000/+1000 V. The separation mechanism is likely employing contributions to the overall cationic charge from both the prevalently anionic membrane proteins and the cationic NB. Importantly, the resulting cationic NB-stained cells exhibited excellent separation selectivity and efficiency of ~38000 theoretical plates for rapid separations within 30-40 s. The results indicate the potential of chip-CE for microbial analysis, which offers separations of a wide range of species with high efficiency, sensitivity, and throughput. © 2012 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim.

Country of Publication: Germany

Publisher: Wiley-VCH Verlag (P.O. Box 101161, Weinheim D-69451, Germany)

CAS Registry Number: 139-33-3 (edetate disodium); 25322-68-3 (macrogol)

Publication Type: Journal: Article

Subject Headings:

*analytic method
article
Candida albicans
*capillary electrophoresis
controlled study
Escherichia coli
flow cytometry
fungus
Gram negative bacterium
Gram positive bacterium
high throughput screening
*laser induced fluorescence
*microorganism
nonhuman
pH
*separation technique
single cell analysis
Staphylococcus aureus
edetate disodium
electrolyte

macrogol
"membrane protein/ec [Endogenous Compound]"

Source: EMBASE

73. Chronically recurrent vulvovaginal candidosis-problems and chances

Citation: Mycoses, June 2012, vol./is. 55/(37-38), 0933-7407 (June 2012)

Author(s): Mendling W.

Institution: (Mendling) Private Center for Gynecological Infections, Berlin, Germany

Language: English

Abstract: Acute vulvovaginal candidosis (AVC) and chronically recurrent vulvovaginal candidosis (CRVC) are both in about 90% caused by Candida (C.) albicans. CRVC needs a 'chronically recurrent' treatment similar to other chronic diseases, because the underlying vaginal immunological deficiencies, which allow repeated vaginal infections, and hypersensitivity against C. albicans antigens, which can cause inflammation, could not be treated up to now. Therefore are repeated oral doses of 100-200 mg fluconazole for months in different treatment regimes recommended to achieve symptom-free, but not always Candida-free periods. Vaginal 'chronically repeated' clotrimazole 500 mg treatments are shown to be as successful as oral fluconazole, but there seems to be a risk of the emergence of vulvodynia/burning vulva syndrome. Fluconazole should not be taken during pregnancy, although some cases with neonatal bone defects were recently only reported after high fluconazole doses in the first trimester. Resistence of C. albicans against fluconazole plays no clinically important role, but needs further control. Typical risk factors for CRVC are use of antibiotics and elevated serum glucose levels, but often are such factors not be found in otherwise healthy patients with CRVC. C. glabrata vaginitis occurs in only 2-3% of cases with AVC or CRVC according to some central european studies, but needs doses of at least 800 mg oral fluconazole or vaginal boric acid treatment, which is not allowed in Germany. C. krusei- vaginitis is rare and should be vaginally treated with clotrimazole or ciclopiroxolamine for 1-2 weeks, because it is resistent to fluconazole. Other non albicans species are susceptible to vaginal imidazoles or oral fluconazole. One of the main Candida virulence factors is secretory aspartyl protease (SAP) 2. Its expression correlates directly with pathogenicity and symptoms. A recombinant, modified, enzymatically inactive form of SAP 2 has been developed (Pevion Biotech, Ittigen/Switzerland), which induced significant serum IgG antibody titers after intramuscular injection and significant cervical IgG antibody titers after vaginal application in healthy premenopausal women with negative vaginal Candida culture before immunization. The titers were elevated for at least 6 months without boostering. It seems, therefore, possible to test SAP 2 vaccination in patients with CRVC to reduce or avoid fluconazole doses.

Conference Information: 18th Congress of the International Society for Human and Animal Mycology Berlin Germany. Conference Start: 20120611 Conference End: 20120615

Publisher: Blackwell Publishing Ltd

Publication Type: Journal: Conference Abstract

Subject Headings:
*human
*society
*mycology
*candidiasis
female
Candida
vaginitis
Candida albicans
patient
hypersensitivity
chronic disease
premenopause
intramuscular drug administration
pregnancy

bone defect
vulva
serum
risk
species
Germany
pathogenicity
inflammation
glucose blood level
risk factor
first trimester pregnancy
immunization
vaccination
immune deficiency
fluconazole
immunoglobulin G
clotrimazole
antigen
aspartic proteinase
virulence factor
imidazole derivative
ciclopiroxolamine
boric acid
antibiotic agent

Source: EMBASE

Full Text: Available from *EBSCOhost* in *Mycoses*

74. Guideline vulvovaginal candidosis (2010) of the German Society for Gynecology and Obstetrics, the Working Group for Infections and Infectimmunology in Gynecology and Obstetrics, the German Society of Dermatology, the Board of German Dermatologists and the German Speaking Mycological Society.

Citation: Mycoses, Jul 2012, vol. 55 Suppl 3, p. 1-13, 1439-0507 (July 2012)

Author(s): Mendling, W; Brasch, J; German Society for Gynecology and Obstetrics; Working Group for Infections and Infectimmunology in Gynecology and Obstetrics; German Society of Dermatology, the Board of German Dermatologists; German Speaking Mycological Society

Abstract: Candida (C.) species colonize the estrogenized vagina in at least 20% of all women. This statistic rises to 30% in late pregnancy and in immunosuppressed patients. The most often occurring species is Candida albicans. Host factors, especially local defense deficiencies, gene polymorphisms, allergic factors, serum glucose levels, antibiotics, psychosocial stress and estrogens influence the risk for a Candida vulvovaginitis. In less than 10% of all cases, non-albicans species, especially C. glabrata, but in rare cases also Saccharomyces cerevisiae, cause a vulvovaginitis, often with fewer clinical signs and symptoms. Typical symptoms include premenstrual itching, burning, redness and non-odorous discharge. Although pruritus and inflammation of the vaginal introitus are typical symptoms, only less than 50% of women with genital pruritus suffer from a Candida vulvovaginitis. Diagnostic tools are anamnesis, evaluation of clinical signs, the microscopic investigation of the vaginal fluid by phase contrast (400 x), vaginal pH-value and, in clinically and microscopically uncertain or in recurrent cases, yeast culture with species determination. The success rate for treatment of acute vaginal candidosis is approximately 80%. Vaginal preparations containing polyenes, imidazoles and ciclopiroxolamine or oral triazoles, which are not allowed during pregnancy, are all equally effective. C. glabrata is resistant to the usual dosages of all local antimycotics. Therefore, vaginal boric acid suppositories or vaginal flucytosine are recommended, but not allowed or available in all countries. Therefore, high doses of 800 mg fluconazole/day for 2-3 weeks are recommended in Germany. Due to increasing resistence, oral posaconazole 2 × 400 mg/day plus local ciclopiroxolamine or nystatin for 15 days was discussed. C. krusei is resistant to triazoles. Side effects, toxicity, embryotoxicity and allergy are not clinically important. A vaginal clotrimazole treatment in the first trimester

of pregnancy has shown to reduce the rate of preterm births in two studies. Resistance of C. albicans does not play a clinically important role in vulvovaginal candidosis. Although it is not necessary to treat vaginal candida colonization in healthy women, it is recommended in the third trimester of pregnancy in Germany, because the rate of oral thrush and diaper dermatitis in mature healthy newborns, induced by the colonization during vaginal delivery, is significantly reduced through prophylaxis. Chronic recurrent vulvovaginal candidosis requires a "chronic recurrent" suppression therapy, until immunological treatment becomes available. Weekly to monthly oral fluconazole regimes suppress relapses well, but cessation of therapy after 6 or 12 months leads to relapses in 50% of cases. Decreasing-dose maintenance regime of 200 mg fluconazole from an initial 3 times a week to once monthly (Donders 2008) leads to more acceptable results. Future studies should include candida autovaccination, antibodies against candida virulence factors and other immunological trials. Probiotics should also be considered in further studies. Over the counter (OTC) treatment must be reduced. © 2012 Blackwell Verlag GmbH.

Subject Headings: Antifungal Agents
Candidiasis Vulvovaginal
Humans
Index Medicus
Pregnancy Complications Infectious
Female
Pregnancy
Candida

Source: Medline

Full Text: Available from *EBSCOhost* in *Mycoses*

75. Guideline vulvovaginal candidosis (2010) of the german society for gynecology and obstetrics, the working group for infections and infectimmunology in gynecology and obstetrics, the german society of dermatology, the board of german dermatologists and the german speaking mycological society

Citation: Mycoses, July 2012, vol./is. 55/SUPPL. 3(1-13), 0933-7407;1439-0507 (July 2012)

Author(s): Mendling W.; Brasch J.

Institution: (Mendling) Vivantes - Klinikum im Friedrichshain and Am Urban, Landsberger Allee 49, 10249 Berlin, Germany; (Brasch) University Hospitals of Schleswig - Holstein, Campus Kiel, Department of Dermatology, Venerology and Allergology, Schittenhelmstrasse 7, 24105 Kiel, Germany

Language: English

Abstract: Candida (C.) species colonize the estrogenized vagina in at least 20% of all women. This statistic rises to 30% in late pregnancy and in immunosuppressed patients. The most often occurring species is Candida albicans. Host factors, especially local defense deficiencies, gene polymorphisms, allergic factors, serum glucose levels, antibiotics, psychosocial stress and estrogens influence the risk for a Candida vulvovaginitis. In less than 10% of all cases, non-albicans species, especially C. glabrata, but in rare cases also Saccharomyces cerevisiae, cause a vulvovaginitis, often with fewer clinical signs and symptoms. Typical symptoms include premenstrual itching, burning, redness and non-odorous discharge. Although pruritus and inflammation of the vaginal introitus are typical symptoms, only less than 50% of women with genital pruritus suffer from a Candida vulvovaginitis. Diagnostic tools are anamnesis, evaluation of clinical signs, the microscopic investigation of the vaginal fluid by phase contrast (400 x), vaginal pH-value and, in clinically and microscopically uncertain or in recurrent cases, yeast culture with species determination. The success rate for treatment of acute vaginal candidosis is approximately 80%. Vaginal preparations containing polyenes, imidazoles and ciclopiroxolamine or oral triazoles, which are not allowed during pregnancy, are all equally effective. C. glabrata is resistant to the usual dosages of all local antimycotics. Therefore, vaginal boric acid suppositories or vaginal flucytosine are recommended, but not allowed or available in all countries. Therefore, high doses of 800mg fluconazole/day for 2-3weeks are recommended in Germany. Due to increasing resistence, oral posaconazole 2x400mg/day plus local ciclopiroxolamine or nystatin for 15days was

discussed. C. krusei is resistant to triazoles. Side effects, toxicity, embryotoxicity and allergy are not clinically important. A vaginal clotrimazole treatment in the first trimester of pregnancy has shown to reduce the rate of preterm births in two studies. Resistance of C. albicans does not play a clinically important role in vulvovaginal candidosis. Although it is not necessary to treat vaginal candida colonization in healthy women, it is recommended in the third trimester of pregnancy in Germany, because the rate of oral thrush and diaper dermatitis in mature healthy newborns, induced by the colonization during vaginal delivery, is significantly reduced through prophylaxis. Chronic recurrent vulvovaginal candidosis requires a "chronic recurrent" suppression therapy, until immunological treatment becomes available. Weekly to monthly oral fluconazole regimes suppress relapses well, but cessation of therapy after 6 or 12months leads to relapses in 50% of cases. Decreasing-dose maintenance regime of 200mg fluconazole from an initial 3times a week to once monthly (Donders 2008) leads to more acceptable results. Future studies should include candida autovaccination, antibodies against candida virulence factors and other immunological trials. Probiotics should also be considered in further studies. Over the counter (OTC) treatment must be reduced. © 2012 Blackwell Verlag GmbH.

Country of Publication: United Kingdom

Publisher: Blackwell Publishing Ltd (9600 Garsington Road, Oxford OX4 2XG, United Kingdom)

CAS Registry Number: 1397-89-3 (amphotericin B); 30652-87-0 (amphotericin B); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 41621-49-2 (ciclopiroxolamine); 23593-75-1 (clotrimazole); 24169-02-6 (econazole); 27220-47-9 (econazole); 73151-29-8 (fenticonazole nitrate); 86386-73-4 (fluconazole); 2022-85-7 (flucytosine); 50-99-7 (glucose); 84778-64-3 (glucose); 1467-16-9 (imidazole); 288-32-4 (imidazole); 84625-61-6 (itraconazole); 22832-87-7 (miconazole nitrate); 52882-37-8 (natamycin); 7681-93-8 (natamycin); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin); 171228-49-2 (posaconazole); 99592-32-2 (sertaconazole); 67915-31-5 (terconazole); 61675-64-7 (tioconazole); 65899-73-2 (tioconazole); 37306-44-8 (triazole)

Publication Type: Journal: Article

Subject Headings:

allergy
anamnesis
article
"burn/si [Side Effect]"
Candida albicans
Candida glabrata
candida krusei
dermatologist
diabetic patient
diaper dermatitis
DNA polymorphism
estrogen blood level
female
first trimester pregnancy
fungal colonization
fungal virulence
fungus culture
genital pruritus
Germany
glucose blood level
"headache/si [Side Effect]"
human
immune deficiency
immunosuppressive treatment
impaired glucose tolerance
inflammation
medical society
mental stress

nonviral gene delivery system
pathogenicity
pH
phase contrast microscopy
pregnancy
"premature labor/dt [Drug Therapy]"
priority journal
"recurrent disease/th [Therapy]"
Saccharomyces cerevisiae
sexual behavior
skin redness
third trimester pregnancy
thrush
"unspecified side effect/si [Side Effect]"
"*vagina candidiasis/di [Diagnosis]"
"*vagina candidiasis/dt [Drug Therapy]"
"*vagina candidiasis/et [Etiology]"
"*vagina candidiasis/th [Therapy]"
vagina discharge
vaginal burning sensation
vaginal delivery
vaginal pruritus
"virus hepatitis/si [Side Effect]"
vulvovaginitis
yeast
"amphotericin B/dt [Drug Therapy]"
"amphotericin B/tp [Topical Drug Administration]"
boric acid
"ciclopiroxolamine/ae [Adverse Drug Reaction]"
"ciclopiroxolamine/cb [Drug Combination]"
"ciclopiroxolamine/dt [Drug Therapy]"
"clotrimazole/cb [Drug Combination]"
"clotrimazole/dt [Drug Therapy]"
"econazole/dt [Drug Therapy]"
estrogen
"fenticonazole nitrate/dt [Drug Therapy]"
"fluconazole/ae [Adverse Drug Reaction]"
"fluconazole/dt [Drug Therapy]"
"fluconazole/po [Oral Drug Administration]"
"flucytosine/tp [Topical Drug Administration]"
glucose
host factor
"imidazole/ae [Adverse Drug Reaction]"
"imidazole/cb [Drug Combination]"
"imidazole/dt [Drug Therapy]"
"imidazole/po [Oral Drug Administration]"
"itraconazole/ae [Adverse Drug Reaction]"
"itraconazole/dt [Drug Therapy]"
"miconazole nitrate/dt [Drug Therapy]"
"natamycin/dt [Drug Therapy]"
"natamycin/tp [Topical Drug Administration]"
"nystatin/cb [Drug Combination]"
"nystatin/dt [Drug Therapy]"
"nystatin/tp [Topical Drug Administration]"
"polyene/dt [Drug Therapy]"
"posaconazole/cb [Drug Combination]"
"posaconazole/dt [Drug Therapy]"
"posaconazole/po [Oral Drug Administration]"
"sertaconazole/dt [Drug Therapy]"
"terconazole/dt [Drug Therapy]"

"tioconazole/dt [Drug Therapy]"
"triazole/po [Oral Drug Administration]"

Source: EMBASE

Full Text: Available from *EBSCOhost* in *Mycoses*

76. Yeast vaginitis during pregnancy: susceptibility testing of 13 antifungal drugs and boric acid and the detection of four virulence factors.

Citation: Medical mycology, Aug 2012, vol. 50, no. 6, p. 585-593, 1460-2709 (August 2012)

Author(s): Kalkanci, Ayşe; Güzel, Ahmet Bariş; Khalil, Israa Ibrahim Jabban; Aydin, Merve; Ilkit, Macit; Kuştimur, Semra

Abstract: A higher prevalence of vulvovaginal candidiasis (VVC) is seen in pregnant women compared with those who are not pregnant. Recurrence is also more common in pregnant women, and therapeutic responses are reduced. In this investigation, 207 vaginal yeast isolates recovered from pregnant women were tested for susceptibility to 13 antifungal drugs and boric acid and through these studies four virulence factors were also determined. The isolates were recovered from vaginal samples of patients with acute VVC [AVVC, (n = 73)], symptomatic recurrent VVC [RVVC, (n = 89)], asymptomatic RVVC (n = 27), and those without signs and symptoms (n = 18). Candida albicans was the most common species found (59.9%), followed by C. glabrata (19.8%), other Candida spp., (19.8%), and Saccharomyces cerevisiae (0.5%). Antifungal susceptibility testing was performed as described in CLSI document M27-A3. Additionally, we examined phospholipase and proteinase production, adhesion to vaginal epithelial cells and hemolytic activity. Notably, the MIC values of Candida spp. isolates derived from patients with VVC were no different from those of the controls ($P > 0.05$). In addition, Candida isolates derived from patients with AVVC or RVVC produced significantly higher amounts of phospholipase and proteinase compared with the controls ($P < 0.05$). Antifungal testing and the determination of virulence factors may lead to the effective and prompt treatment of VVC, particularly in pregnant women.

Subject Headings:
Young Adult
Female
Candidiasis Vulvovaginal
Humans
Pregnancy
Hemolysis
Amphotericin B
Boric Acids
Saccharomyces cerevisiae
Microbial Sensitivity Tests
Fungal Proteins
Adolescent
Candida albicans
Epithelial Cells
Recurrence
Vagina
Cell Adhesion
Itraconazole
Candida glabrata
Antifungal Agents
Phospholipases
Adult
Fluconazole
Animals
Middle Aged
Index Medicus
Pregnancy Complications Infectious
Virulence Factors

Source: Medline

Full Text: Available from *EBSCOhost* in *Medical Mycology*

77. Yeast vaginitis during pregnancy: Susceptibility testing of 13 antifungal drugs and boric acid and the detection of four virulence factors

Citation: Medical Mycology, August 2012, vol./is. 50/6(585-593), 1369-3786;1460-2709 (August 2012)

Author(s): Kalkanci A.; Guzel A.B.; Khalil I.I.J.; Aydin M.; Ilkit M.; Kustimur S.

Institution: (Kalkanci, Khalil, Aydin, Kustimur) Department of Medical Microbiology, Faculty of Medicine, University of Gazi, Ankara, Turkey; (Guzel) Department of Obstetrics and Gynecology, Faculty of Medicine, University of Cukurova, Adana, Turkey; (Ilkit) Department of Microbiology, Faculty of Medicine, University of Cukurova, Adana 01330, Turkey

Language: English

Abstract: A higher prevalence of vulvovaginal candidiasis (VVC) is seen in pregnant women compared with those who are not pregnant. Recurrence is also more common in pregnant women, and therapeutic responses are reduced. In this investigation, 207 vaginal yeast isolates recovered from pregnant women were tested for susceptibility to 13 antifungal drugs and boric acid and through these studies four virulence factors were also determined. The isolates were recovered from vaginal samples of patients with acute VVC [AVVC, (n = 73)], symptomatic recurrent VVC [RVVC, (n = 89)], asymptomatic RVVC (n = 27), and those without signs and symptoms (n = 18). Candida albicans was the most common species found (59.9%), followed by C. glabrata (19.8%), other Candida spp., (19.8%), and Saccharomyces cerevisiae (0.5%). Antifungal susceptibility testing was performed as described in CLSI document M27-A3. Additionally, we examined phospholipase and proteinase production, adhesion to vaginal epithelial cells and hemolytic activity. Notably, the MIC values of Candida spp. isolates derived from patients with VVC were no different from those of the controls (P > 0.05). In addition, Candida isolates derived from patients with AVVC or RVVC produced significantly higher amounts of phospholipase and proteinase compared with the controls (P <0.05). Antifungal testing and the determination of virulence factors may lead to the effective and prompt treatment of VVC, particularly in pregnant women. © 2012 ISHAM.

Country of Publication: United Kingdom

Publisher: Informa Healthcare (69-77 Paul Street, London EC2A 4LQ, United Kingdom)

CAS Registry Number: 1397-89-3 (amphotericin B); 30652-87-0 (amphotericin B); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 189768-38-5 (caspofungin); 23593-75-1 (clotrimazole); 24169-02-6 (econazole); 27220-47-9 (econazole); 86386-73-4 (fluconazole); 2022-85-7 (flucytosine); 84625-61-6 (itraconazole); 65277-42-1 (ketoconazole); 22916-47-8 (miconazole); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin); 9013-93-8 (phospholipase); 9001-92-7 (proteinase); 61318-90-9 (sulconazole); 61318-91-0 (sulconazole); 91161-71-6 (terbinafine); 61675-64-7 (tioconazole); 65899-73-2 (tioconazole)

Publication Type: Journal: Article

Subject Headings:
adult
antifungal susceptibility
article
Candida albicans
Candida glabrata
cell adhesion
controlled study
epithelium cell
female
fungal detection
*fungal virulence
hemolysis
human

human tissue
major clinical study
minimum inhibitory concentration
nonhuman
*pregnancy complication
recurrent disease
Saccharomyces cerevisiae
statistical significance
vagina candidiasis
vagina epithelium
"*vagina mycosis/di [Diagnosis]"
"*vagina mycosis/et [Etiology]"
amphotericin B
antifungal agent
*boric acid
caspofungin
clotrimazole
econazole
fluconazole
flucytosine
itraconazole
ketoconazole
miconazole
nystatin
"phospholipase/ec [Endogenous Compound]"
"proteinase/ec [Endogenous Compound]"
sulconazole
terbinafine
tioconazole
"*virulence factor/ec [Endogenous Compound]"

Source: EMBASE

Full Text: Available from *EBSCOhost* in *Medical Mycology*

78. Genotyping Reveals no Link Between Candida albicans Genotype and Vaginitis Severity in Turkish Women

Citation: Mycopathologia, 2013, vol./is. 175/3-4(287-294), 0301-486X (2013)

Author(s): Guzel A.B.; Dogen A.; Aydin M.; Serin A.; Serin M.S.; Kalkanci A.; Ilkit M.

Institution: (Guzel) Department of Obstetrics and Gynecology, Faculty of Medicine, University of Cukurova, Adana, Turkey; (Dogen, Serin) Department of Pharmaceutical Microbiology, Faculty of Pharmacy, University of Mersin, Mersin, Turkey; (Aydin, Kalkanci) Department of Microbiology, Faculty of Medicine, University of Gazi, Ankara, Turkey; (Aydin) Department of Microbiology, Faculty of Medicine, University of Erzincan, Erzincan, Turkey; (Serin) Department of Forensic Medicine, Faculty of Medicine, University of Cukurova, Adana, Turkey; (Ilkit) Division of Mycology, Department of Microbiology, Faculty of Medicine, University of Cukurova, 01330 Adana, Turkey

Language: English

Abstract: Recent studies have clearly defined the vaginopathic Candidaalbicans strains that cause severe vulvovaginal candidiasis (VVC). Therefore, genotyping C. albicans isolates may predict the success of and assist in choosing the appropriate antifungal therapy. The purpose of this study was to compare the genotypes of C. albicans isolates causing VVC with those found in asymptomatic healthy pregnant and non-pregnant women in Adana, Turkey, as well as the antifungal susceptibility profiles of these isolates. A total of 216 independent C. albicans isolates were genotyped by allelic combination based on the microsatellite marker analysis of one such microsatellite, present in the promoter region of the elongation factor 3-encoding gene (CEF3) of C. albicans. The susceptibility testing profiles of all of the isolates against five antifungals and boric acid were obtained retrospectively from our laboratory records. We identified 20 genotypes on the basis of different allelic combinations at the CEF3 locus with a discriminatory power of 0. 85.

Genotypes 136-144 and 126-135 were present in 50 % of the isolates. No differences existed in the genotypic profiles of fungal isolates between pregnant and non-pregnant women. Remarkably, we did not find a single vaginopathic genotype. All of the isolates were susceptible to amphotericin B and 5-fluorocytosine, and the fluconazole and ketoconazole resistance rates were 0. 9 and 3. 7 %, respectively. Therefore, we did not find any correlation between genotype, severity of VVC, and antifungal resistance (P > 0. 05). Even so, additional molecular data may provide new insights into the management of VVC. © 2013 Springer Science+Business Media Dordrecht.

Country of Publication: Netherlands

Publisher: Springer Netherlands (Van Godewijckstraat 30, Dordrecht 3311 GZ, Netherlands)

Publication Type: Journal: Article

Subject Headings:
article
*Candida albicans
classification
female
genetics
genotype
human
isolation and purification
microbial sensitivity test
*microbiological examination
microbiology
*molecular typing
pathogenicity
pathology
pregnancy
"Turkey (republic)/ep [Epidemiology]"
"*vagina candidiasis/ep [Epidemiology]"
"antifungal agent/pd [Pharmacology]"
fungal DNA
microsatellite DNA

Source: EMBASE

Full Text: Available from *ProQuest* in *Mycopathologia*
Available from *Springer NHS Pilot 2014 (NESLi2)* in *Mycopathologia*; Note: ; Collection notes: Academic-License. Please when asked to pick an institution please pick NHS. Please also note access is from 1997 to date only.

79. Genotyping reveals no link between Candida albicans genotype and vaginitis severity in Turkish women.

Citation: Mycopathologia, Apr 2013, vol. 175, no. 3-4, p. 287-294, 1573-0832 (April 2013)

Author(s): Güzel, Ahmet Barış; Döğen, Aylin; Aydın, Merve; Serin, Ayşe; Serin, Mehmet Sami; Kalkancı, Ayşe; Ilkit, Macit

Abstract: Recent studies have clearly defined the vaginopathic Candida albicans strains that cause severe vulvovaginal candidiasis (VVC). Therefore, genotyping C. albicans isolates may predict the success of and assist in choosing the appropriate antifungal therapy. The purpose of this study was to compare the genotypes of C. albicans isolates causing VVC with those found in asymptomatic healthy pregnant and non-pregnant women in Adana, Turkey, as well as the antifungal susceptibility profiles of these isolates. A total of 216 independent C. albicans isolates were genotyped by allelic combination based on the microsatellite marker analysis of one such microsatellite, present in the promoter region of the elongation factor 3-encoding gene (CEF3) of C. albicans. The susceptibility testing profiles of all of the isolates against five antifungals and boric acid were obtained retrospectively from our laboratory records. We identified 20 genotypes on the basis of different allelic combinations at the CEF3 locus with a discriminatory power of 0.85. Genotypes 136-144 and 126-135 were present in 50 % of the isolates. No differences existed in the genotypic profiles of fungal isolates between pregnant and non-pregnant women. Remarkably, we did not find a single vaginopathic genotype. All of the isolates

were susceptible to amphotericin B and 5-fluorocytosine, and the fluconazole and ketoconazole resistance rates were 0.9 and 3.7 %, respectively. Therefore, we did not find any correlation between genotype, severity of VVC, and antifungal resistance (P > 0.05). Even so, additional molecular data may provide new insights into the management of VVC.

Subject Headings:
Turkey
Molecular Typing
Genotype
Candida albicans
Humans
Candidiasis Vulvovaginal
Antifungal Agents
Microsatellite Repeats
DNA Fungal
Female
Pregnancy
Mycological Typing Techniques
Index Medicus
Microbial Sensitivity Tests

Source: Medline

Full Text: Available from *ProQuest* in *Mycopathologia*
Available from *Springer NHS Pilot 2014 (NESLi2)* in *Mycopathologia*; Note: ; Collection notes: Academic-License. Please when asked to pick an institution please pick NHS. Please also note access is from 1997 to date only.

80. FLUCONAZOLE AND BORIC ACID FOR TREATMENT OF VAGINAL CANDIDIASIS--NEW WORDS ABOUT OLD ISSUE.

Citation: East African medical journal, Apr 2013, vol. 90, no. 4, p. 117-123, 0012-835X (April 2013)

Author(s): Khameneie, K M; Arianpour, N; Roozegar, R; Aklamli, M; Amiri, M M

Abstract: To compare boric acid as an effective treatment for VVC compared to fluconazole. We also studied the efficiency of these drugs in preventing recurrence of VVC. A cross sectional, randomized, double-blind study. Gynaecology clinic of Imam Reza hospital, Tehran - Iran Women with signs and symptoms related to Vulvo Vaginal Candidiasis. Seventy five patients out of total 150 patients with signs and symptoms related to Vulvo Vaginal Candidiasis were treatedwith boric acidpowder everynight for a week and the remaining 75 patients received Fluconazole. The cure rate in first group was 46.7% but the cure rate in second group was 37.3%. The difference was not statistically significant (P>0.3). Difference between the efficacy of the two drugs was not significant either (P=0.47). The recurrence rate among patients in first group was 35% while it was 32% in second group. Their difference was not statistically significant (P=0.54). According to our findings, treatment of vaginal candidiasis with boric acid is as effective as fluconazole. The availability of boric acid and its relatively low cost suggests it as a safe and effective drug for treatment of candidiasis.

Subject Headings:
Treatment Outcome
Iran
Administration Intravaginal
Humans
Administration Oral
Candidiasis Vulvovaginal
Antifungal Agents
Secondary Prevention
Index Medicus
Adult
Female
Fluconazole
Boric Acids

Candida
Double-Blind Method

Source: Medline

81. FLUCONAZOLE AND BORIC ACID FOR TREATMENT OF VAGINAL CANDIDIASIS--NEW WORDS ABOUT OLD ISSUE

Citation: East African medical journal, April 2013, vol./is. 90/4(117-123), 0012-835X (01 Apr 2013)

Author(s): Khameneie K.M.; Arianpour N.; Roozegar R.; Aklamli M.; Amiri M.M.

Institution: (Khameneie, Arianpour, Roozegar, Aklamli, Amiri) Department of Obstetrics and Gynecology, Imam Reza hospital, Tehran - Iran

Language: English

Abstract: OBJECTIVE: To compare boric acid as an effective treatment for VVC compared to fluconazole. We also studied the efficiency of these drugs in preventing recurrence of VVC.DESIGN: A cross sectional, randomized, double-blind study.SETTINGS: Gynaecology clinic of Imam Reza hospital, Tehran - IranSUBJECTS: Women with signs and symptoms related to Vulvo Vaginal Candidiasis.RESULTS: Seventy five patients out of total 150 patients with signs and symptoms related to Vulvo Vaginal Candidiasis were treatedwith boric acidpowder everynight for a week and the remaining 75 patients received Fluconazole. The cure rate in first group was 46.7% but the cure rate in second group was 37.3%. The difference was not statistically significant (P>0.3). Difference between the efficacy of the two drugs was not significant either (P=0.47). The recurrence rate among patients in first group was 35% while it was 32% in second group. Their difference was not statistically significant (P=0.54).CONCLUSION: According to our findings, treatment of vaginal candidiasis with boric acid is as effective as fluconazole. The availability of boric acid and its relatively low cost suggests it as a safe and effective drug for treatment of candidiasis.

Country of Publication: Kenya

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 86386-73-4 (fluconazole)

Publication Type: Journal: Article

Subject Headings:
adult
*Candida
"*Candidiasis Vulvovaginal/di [Diagnosis]"
"*Candidiasis Vulvovaginal/dt [Drug Therapy]"
controlled study
double blind procedure
drug effects
female
human
intravaginal drug administration
Iran
isolation and purification
oral drug administration
pathophysiology
procedures
randomized controlled trial
secondary prevention
treatment outcome
"antifungal agent/ad [Drug Administration]"
"boric acid/ad [Drug Administration]"
"fluconazole/ad [Drug Administration]"

Source: EMBASE

82. Candida vaginitis in non-pregnant patients: A study of antifungal susceptibility testing and virulence factors

Citation: Journal of Obstetrics and Gynaecology, May 2013, vol./is. 33/4(378-383), 0144-3615;1364-6893 (May 2013)

Author(s): Kalkanci A.; Guzel A.B.; Jabban I.I.K.; Aydin M.; Ilkit M.; Kustimur S.

Institution: (Kalkanci, Jabban, Aydin, Kustimur) Department of Microbiology, Faculty of Medicine, University of Gazi, Ankara, Turkey; (Guzel) Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Cukurova, Adana, 01330, Turkey; (Ilkit) Division of Mycology, Department of Microbiology, University of Cukurova, Adana, Turkey

Language: English

Abstract: Vulvovaginal candidosis (VVC) is a major problem for the female population worldwide, and considerably little is known about the difference between acute VVC (AVVC) and recurrent VVC (RVVC). We investigated the susceptibility to six antifungal agents and boric acid of Candida spp. isolated from vaginal cultures, as described in the CLSI document M27-A3, from 228 non-pregnant sexually active women (aged 18-49 years), and the virulence factors of these isolates. The isolates were derived from patients with AVVC (n = 64), those with RVVC (n = 125) and those without signs or symptoms (n = 39). In total, C. albicans was the most commonly isolated species (50%), followed by C. glabrata (35.5%) and other Candida spp. (14.5%). We observed slightly different minimum inhibitory concentration (MICs) for various antifungals among the species and study groups that could have potential therapeutic benefits for the treatment. Analysis of the virulence factors revealed that haemolytic activity is not involved in VVC pathogenesis but that germ-tube formation, adhesion to VECs, and proteinase and phospholipase production may be important in the pathogenesis of VVC. © 2013 Informa UK, Ltd.

Country of Publication: United Kingdom

Publisher: Informa Healthcare (69-77 Paul Street, London EC2A 4LQ, United Kingdom)

CAS Registry Number: 1397-89-3 (amphotericin B); 30652-87-0 (amphotericin B); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 86386-73-4 (fluconazole); 2022-85-7 (flucytosine); 84625-61-6 (itraconazole); 65277-42-1 (ketoconazole); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin)

Publication Type: Journal: Article

Subject Headings:
adult
*antifungal susceptibility
article
asymptomatic disease
bacterium carrier
*Candida
Candida glabrata
controlled study
female
*fungal virulence
fungus culture
fungus isolation
human
major clinical study
minimum inhibitory concentration
priority journal
*recurrent vulvovaginal candidosis
*vagina candidiasis
*vulvovaginal candidosis
*amphotericin B
boric acid
*fluconazole
*flucytosine
*itraconazole
*ketoconazole

*nystatin
virulence factor

Source: EMBASE

Full Text: Available from *EBSCOhost* in *Journal of Obstetrics & Gynaecology*

83. Candida vaginitis in non-pregnant patients: a study of antifungal susceptibility testing and virulence factors.

Citation: Journal of obstetrics and gynaecology : the journal of the Institute of Obstetrics and Gynaecology, May 2013, vol. 33, no. 4, p. 378-383, 1364-6893 (May 2013)

Author(s): Kalkanci, A; Güzel, A B; Jabban, I I K; Aydin, M; Ilkit, M; Kuştimur, S

Abstract: Vulvovaginal candidosis (VVC) is a major problem for the female population worldwide, and considerably little is known about the difference between acute VVC (AVVC) and recurrent VVC (RVVC). We investigated the susceptibility to six antifungal agents and boric acid of Candida spp. isolated from vaginal cultures, as described in the CLSI document M27-A3, from 228 non-pregnant sexually active women (aged 18-49 years), and the virulence factors of these isolates. The isolates were derived from patients with AVVC (n = 64), those with RVVC (n = 125) and those without signs or symptoms (n = 39). In total, C. albicans was the most commonly isolated species (50%), followed by C. glabrata (35.5%) and other Candida spp. (14.5%). We observed slightly different minimum inhibitory concentration (MICs) for various antifungals among the species and study groups that could have potential therapeutic benefits for the treatment. Analysis of the virulence factors revealed that haemolytic activity is not involved in VVC pathogenesis but that germ-tube formation, adhesion to VECs, and proteinase and phospholipase production may be important in the pathogenesis of VVC.

Subject Headings: Case-Control Studies
Adolescent
Humans
Candidiasis Vulvovaginal
Antifungal Agents
Index Medicus
Recurrence
Young Adult
Virulence Factors
Adult
Female
Middle Aged
Candida
Microbial Sensitivity Tests

Source: Medline

Full Text: Available from *EBSCOhost* in *Journal of Obstetrics & Gynaecology*

84. 2nd National Congress on Medicinal Plants

Citation: Iranian Journal of Pharmaceutical Research, October 2013, vol./is. 12/(43), 1735-0328;1726-6890 (Oct 2013)

Author(s): anonymous

Language: English

Abstract: The proceedings contain 1453 papers. The special focus in this conference is on Medicinal Plants. The topics include: Repellency effects of commercial formulation of eucalyptus extract on red flour beetle, tribolium castaneum herbst; antifungal effects of fennel oil on the growth of aspergillus flavus; in vitro antifungal affects essential oil of origanum vulgare L. and comparison with synthetic thymol on aspergillus flavus; antimicrobial activity of avicennia marina extract against staphylococcus aureus; antimicrobial activity of avicennia marina extract against escherichia coli; study of milk thistle (silybum marianum L) germination attributes and seed vigor under salinity stress by osmopriming accelerators; evaluation of hesperidin flavonoid in different tissues

during fruit development of limon (C. limon Cv. eureka); inhibitory effect of tea tree oil and aloe vera leaf gel shampoo on malassezia furfur; effect of gamma irradiation on antioxidant and antimicrobial activities of echinacea (echinacea purpurea L.); development of a validated high pressure liquid chromatography method for simultaneous determination of stevioside and rebodioside a in sweeteners; allelopathic potential of madder (rubia tinctorum) extracts on field bindweed (convolvolus arvense L.) and corn (Zea Mays L.) germination characteristics; suppressing effects of rhubarb (rheum ribe) extracts on purslane (portulaca oleracea) and alfalfa (medicago sativa) seedling growth; effect of dormancy breaking treatments on germination charachteristics of acacia (Albezia Lebbek); investigation of chemical essential oil components of chaerophyllum macrospermum in kandovan; evaluation effects of antimicrobial thyme essential oil on loads microbial and qualitative characteristics of fresh-cut carrotvilmorincultivar in duration storage; the study of effects of berberis vulgaris hydriethanolic extracts on serum bilirubin level and aenzymes of the liverin male cholestatic rats; the effect of aqueous extract of allium sativum on behavioral changes in parkinson male rat; investigation of chemical essential oil components of thymus eriocalyx in peresk area (in alashtar-lorestan province); investigation of chemical essential oil components of thymus lancifolious in zagheh area (in lorestan province); effect of different soil series and manure application on dried flower yield, essential oil and chamazulene content and essential oil yield of german chamomile; effect of manure application on essential oil content, essential oil yield and chamazulene content of German chamomile in different soil series of Chaharmahal-Va-bakhtiari province; chemical compositions and antimicrobial activity of essential oil of phlomis cancellata bunge. from mazandaran; effect of ruta graveolens extract on histopathologic changes in mice livers; composition of free and glycosidically bound volatile components of achillea tenuifolia lam. root; study gene expressions of cinnamyl alcohol--dehydrogenase, lignin and lignan compounds at different organs of linum album; antiproliferative effects of ferula gummosa extracts on different cancer cell lines; investigation antibacterial activity of essential oils from plant family lamiaceae on tree bacterial species; effects of biologic and organic fertilizers on mentha piperita in hydroponic condition; investigate effect of different nursery bed on marcotting rosemary cutting; comparative studies on phosphomolybdenum assay, DPPH and reducing power antioxidant properties in microshoots of five persian walnuts; the effects of salinity on soluble sugars and prolin in the medicinal plant borago officinalis L. on the hydroponic conditions; the effects of salinity on chlorophyll content and growth of borago officinalis L.; introduction of medicinal plants in the upper giyan region in tafresh area; comparative study of anti-inflammatory effects of rubia tinctorum L. extracts in carrageenan-induced paw edema in rats; effect of microwave radiation on seed germination and seedling growth of thyme; effect of B vitamins on germination factors of fennel; introduction of medicinal plants of ashtian mountain protected area; effect of NaCl and gibberellic acid on seed germination and seedling growth of 5 medicinal plants; investigation of medinical plant consumption in khorram abad township viewpoint herbal grocery; effect of different levels of irrigation and plant growth promoting rhizobacteria on grain yield and root chang of chamomile (matricaria recutita L.); effect of bio-fertilizer on germination and seedling of chamomil (matricaria recutita L.) cultivars; antimicrobial effects of alcohol extract of curcuma longa L. on the some of bacteria; antioxidative, antimicrobial and cytotoxic activities of kunstlerone from beilschmiedia species; alkaloidal compounds from bark of beilschmiedia; bioactivities of kunstleramide as a dienamide from lauraceae family; alkaloidal natural products in the leaf of malaysian beilschmiedia; identification of agronomic traits influencing seed yield of some Iranian fenugreek (trigonella foenumgraecum L) ecotypes; the effect of salinity stress on germination in dracocephalum moldavica seeds; study of genetic diversity in persian shallot (allium hirtifolium) based on morphological traits; amount of micro and macro elements in leaves of medicinal plant calendula officinalis L. with foliar application of bio-stimulators; the effects of different nitrogen levels on yield, yield components and oil percentage of spring safflower cultivars in kerman, Iran; protective effects of green tea on antioxidative biomarkers in chemical laboratory workers; effect of IBA as a root promoting hormne and bio-fertilizers in propagating of lavandula (lavandula officinal) by cutting; shoot initiation of bistort (polygonum bistorta) explants under in vitro condition; antihypertensive effect of celery seed on rat blood pressure in chronic administration; investigation of salicylic acid and kinetin effects on seed germination and seedling growth

of lemon balm (melissa officinalis L.) under salinity stress; investigation the amonut of fiber and phenolic compounds in sclerorhachis leptoclada from south Khorasan; he effect of differen super absorbent polymer and drought stress on grain yield and essintial oil of chamomile; the effect of strains of pseudomonas on growth and development of root in thyme (thymus vulgaris L.); isolation, structural characterization and antioxidant activity of a new water-soluble polysaccharide from acanthophyllum squarrosum roots; the study of polyphenols profiles, carbohydrates content and antioxidant capacities in sophora pachycarpa C. A. Mey; evaluation of nutrient content (crude protein, fat content, crude fiber, neutral detergent fiber and acid detergent fiber) and heavy metals in sophora pachycarpa C. A. Mey; effects of mulching on quantity and quality yield of garlic populations (allium sativum L.); study of different weed management methods of thyme (thymus vulgaris L.); effect of humic acid and vermicompost on flower yield, seed yield and yield components of safflower in kerman, Iran; introduction of medicinal plants of zalian area in the city sareband located in the Markazi province; effect of wormwood (artemisia absinthium) essential oil on antioxidant status and lipid peroxidation in broiler chickens; effect of essential oil of cumin (cuminum cyminum) medicinal herb on antioxidant status, lipid peroxidation and serum metabolities in broiler chickens; effect of different salinity levels on germination and early seedling growth of medical plant capparis spinosa L.; studies on seed germination and seedling growth in mentha longifolia L. under abiotic stress conditions; evaluation of heavy metals in some medicinal plants growing in sistan region; antibacterial activity of teucrium polium essential oil against clinical isolates of klebsiella pneumoniae; the effect of methanol and nano-iron chalate fertilizer on chlorophyll content, some morphological and agronomical traits of ocimum basilicum L.; new trends in the utilization of medicinal and aromatic plants; response of anticancer compounds to nitrogen fertilizer in naein-E havandi (andrographis paniculata); photosynthesis and antioxidative systems of naein-E havandi (andrographis paniculata) as affected by compost tea rates; effects of water stress (drought) on the mineral and vitamin content of the leaves of a medical plant brassica rapa L.; the effects of hydroalcoholic extract of nigella sativa on the activity of liver enzymes in female rats; influence of some environmental factors on the morphological traits of thymus daenensis celak; improvement of solvent systems in TLC chromatography of flavonoids from leaves of glycyrrhiza glabra L. and fritillaria imperialis L. using a software system; distribution of spirulina the blue-green gold of Iran; electrobotany of medicinal algae of Iran; introduction to engineering for medicinal plants of Iran; the cites and medicinal plants of Iran; the importance for aquatic medicinal plants of Iran; the prospects and challenges for algae therapy in Iran; optimization of microencapsulation of pomegranate seed oil by response surface methodology; effect of sucrose concentration on the growth and trigonelline production in hairy root culture of Iranian fenugreek (trigonella foenum-graecum L.); investigation the sustainability of mazooj gall and its inducer agent wasp in oak forests of West-Azerbaijan; volatile oil of artemisia santolina decreased the morphine withdrawal jumping in mice; species diversity and distribution of the medicinal galls by oak gall wasps species in West-Azerbaijan; identifying the best time to harvest of mazooj gall in oak forests of West-Azerbaijan province; bioactive sesquiterpene lactone from artemisia santolina; presence of monoterpene synthase in four labiatae species and SPME- GC-MS analysis of their aroma profiles; monoterpene synthase from lavandula angustifolia and solid-phase microextraction- gass chromatography-mass spectroscopy analysis of its aroma profile; antioxidant and hydroxyl radical scavenging activity of phoenix dactylifera L. var.deyry fruit and seed; GC/Mass analysis of the volatile compounds of P. hyrcanicumdiethyl ether extract and GC profiling of some Iranian polygonum species; effects of sowing date in spring and summer, and various amounts of vermicompost on growth and yield of fenugreek; effect of salt stress on germination factors of lemon balm (melissa officinalis L.); chemical composition and antioxidant activity of essential oils of three Iranian herbs (apiaceae family); effects of drought stress and different nitrogen levels on the quantitative and qualitative yield of black cumin (nigella sativa L.) in sistan region; evaluation of free radical scavenging activity of plant extracts and essential oil of mentha aquatica L.; analysis of volatile oil components extracted by SDE technique and antioxidant activity of oily components of "water mint"; analysis of the essential oil components of mentha aquatic L. collected in tehran province; changes in oil yield and chemical components of the essential oil of satureja bachtiarica bunge under five drying methods; effects of cold stress and seed scratching on seed

germination and some growth related characteristics of wild pistachio (pistacia atlantica desf.); evaluation of medical and pharmaceutical effects of extract bark of tree species beech, spruce and oak; callus induction evaluation of two Iranian native seashore iris subspecies, using different explants through in vitro culture; effect of drought stress in different growth stages on some of morphological traits of peppermint (mentha piperiat L.); effect of osmoprinimg on seed germination of osimum basilicum under drought stresses; chemical constitutes of the essential oil of artemisia aucheri boiss from high altitude of chaharmahal va bakhtiari; study of effects on wounds healing of rhubarb extract in rat; local effect of eugenol oil on the skin wound healing in rat; comparison of carvacrol level and antibacterial properties of industrial and laboratory extracted essential oils of the wild and cultivated satureja khuzestanica; effect of phytohormones on composition of sambucus nigra L. essential oil; oleuropein extracted from olive tree leaves maceration and soxhlet method and measured with high performance liquid chromatography; the effect of salinity stress from NaCl on seedling growth of docrosia anethifolia herb in hydroponic irrigation condition and determination its salinity tolerance threshold; investigation of in vitro apocarotinoid gene expression in perianth of saffron (crocus sativus) Iran; effect of height on hypericin content of St. John'S wort; effect of elaegnus angustifolia L. hydroethanolic leaf extract on serum triglycerides, LDL, HDL and total cholesterol of male rats; the investigation of the some chemICal components of volatile oil of four specIEs MINt leaves IN the VarIOus growth stages; antifungal activity of the essential oil of salvia virgata; evaluation of the effect of organic fertilizers and mulch application on growth, development, essential oil content, and microbial load in peppermint (mentha piperita L.); the comparision GC and GC-MS of allium ampeloprasum L. Var, atroviolaceum regel and allum Iranicum wendelbo (wendelbo); in vitro antimicrobial activity of allium ampeloprasum L. var atroviolaceum regel; effect of methanol and nano-iron chelated fertilizer application on activity of polyphenol oxidase, glutathione peroxidase and essential oils content in basil (ocimum basilicum L.); diterpene compounds in essential oils of juniperusexcelsa; in vivo effect of melissa officinalis essential oil on growth and aflatoxin production by aspergillus flavus isolated from stored corn; clinical acute toxicity information of mentha longifolia essential oil investigation of medinical plant consumption in khorram abad township viewpoint customers; evaluation of different drying methods on essential oil and chamazolene contents of chamomile flowers; study of different drying methods on qualitative characteristics of thyme; analysis of seed germination in two medicinal species of salvia under different chemical treatments; the survey on effects of irrigation and weed control on yield, yield component and seed oil contents of marigold (calendula officinalis L.); the survey on effects of nitrogen fertilizer application and density on seed yield, yield components and oil content of marigold (calendula officinalis L.); evaluation of antiradical activity and antioxidant capacity of methanolic extract of gorg tigh plant (lycium ruthenicum murry); determination of total phenolic, tannin and flavonoid content in lycium ruthenicum murry; anticonvulsive effects of vitexin, a flavonoid, on pentylenetetrazole-induced seizure in rats; correlation and path coefficient analysis of seed yield and yield components of flax; effect of No on Fe deficiency-induced chlorosis in melissa officinalis; effect of valerian officinalis on FSH and estrogen in female mature rats; investigation of antioxidant enzymes activities, soil texture, and stigma-like structures in petals culture of saffron (crocus sativus L.); phylogenetic analysis of the tribe fabeae based on plastid DNA sequences; effect of UV-C radiation on some physico chemical on pomegranate in warehouse (punica granatum L.); preparation of nanoniosomal paclitaxel formulation and evaluation its effects on the breast cancer cell line (MCF-7); heavy metal accumulation in medicinal plants chenopodium album collected from environmentally different sites; aerial parts flavonoids of eleocharis uniglumis (link) schult. (cyperaceae); root flavonoids of cyperus L. (cyperaceae) species in markazi province, Iran; antibacterial activities of euphorbia splendida mobayen (euphorbiacea); chemical constituents of artemisia kopetdaghensis krasch; antimicrobial activity and essential oil composition of thymus transcaucasicus ronniger; chemical composition and antibacterial activity of essential oil of nepeta asterotricha rech. F. from Iran; the study of the essential oil constituents of various species of the mint flower in the flowering and after flowering stages; cadmium increase glycyrrhizic acid content in glycyrrhiza glabra var. glandulifera calli; the effect of salicylic acid on anthocyanin content in licorice; silymarinattenuated themycophenolate mofetil-induced villous

atrophyand lipid peroxidation in the duodenum of rat; effect of cynara scolymus on the fat metabolism under heat stress condition in broiler chickens; compare of the crataegus extract and nimodipine effect on passive avoidance learning of male wistar rats; NAA and IBA as plant growth regulators for micro propagation of thymus vulgaris L.; recycling preparative high performance liquid chromatography for separation of the curcumin from curcuminoids present in curcuma longa L.; in vitro micropropagation of lavandula angustifolia l.; evaluation on the effects of nitrogen and potassium fertilizers on growth and yield of roselle (hibiscus sabdariffa var. L.) in Iranshahr; bilogical activities of stachys kermanshahensis rech. F. essential oil; effect of olive leaves as a phytobiotic feed additive on performance, antioxidant status and ascites mortality reduction in broiler chickens; streptozotocin-induced diabetic rats; effects of environmental factors on rooting of (pistacia mutica) micropropagation; studies on bacterial contamination of pistacia mutica seeds and leaves through DNA fingerprinting; evaluation of the use of herbal medicines by the people in the karaj city; investigation on development and promotion of herbal medicines in karaj pharmacies; in vitro culture of pistacia mutica (baneh); the effects of red dried stigmas of crocus sativus L.flowers (saffron) on growth and maturation of oocytes in female three spot gourami (trichogaster trichopterus); foliar application of salicylic acid changes essential oil content and compositions of peppermint (mentha piperita L.); chemical composition and biological activites of salvia compressa essential oil; evaluation of salicylic acid on tolerance to salt and alkali stresses in peppermint (mentha piperita L.); evaluation of growth response in echinacea purpurea to application of zinc sulphate under drought stress; evaluation of the achillea millefolum effect in nausea and vomiting of early pregnancy; the insecticidal effects of laurus nobilis and myrtus commonison essential oils against immature stages of ephestia kuehniella zeller; chemical constitutes of the essential oil of tanacetum persicum (boiss.) mozaff from kallar mountain; chemical composition of the essential oil of valerina sisymbriifolia vahl from kallar mountain; the oviposition deterrency of two plant essential oils from, laurus nobilis and myrtus commonis on the adults of mediterranien flour moth, ephestia kuehniella zeller; the medicinal effect of lavender on nervous system; influences of salicylic acid and droughts stress on growth characteristics of thymus daenensis celak; study of tissue culture and callus induction in papaver bracteatum; root and shoot growth of isabgol (plantago ovata) under organic manure, phosphate bio-fertilizer and chemical fertilizer treatments; analysis of the volatile compounds in origanum vulgare L. subsp.viride using HS-SPME-GC-MS and comparison with conventional method; effect of calendula officinalispowder on broiler chickens weight and lymphoid organ weights under heat stress condition; diversity ofchemical compositions of essential oil of various landraces of cuminum cyminum L from northeastIran; enhancement of extracellular baccatin III production and Dbat gene expression in cell suspension culture of taxus treated by methyl jasmonate; jasmonic and salicylic acid effects on chemical composition of melissa officinalis L.oil; effect of essential oil of thymus deanensis clelak, satureja bachtiarica bung and ziziphora clinopodioides lam on hematological parameters in rats; effects of plant density on yield, yield components of medicinal plant coneflower (echinacea purppurea); comparison on quality and quantity of essential oil six cultivated thymus species at before flowering and full flowering stages; ecological investigation of 10 aromatic plant species of asteraceae family in yazd province; survey on phenology and aeclimitization some thymus species in field; the effect of salinity on seed germination and early seedling growth saturega bachtiarica; survey on quality and quantity of essential oil cultivated accessions of thymus lancifolius in province yazd; survey on quality and quantity of essential oil cultivated accessions of thymus kotschyanus in province yazd; study of the effect of hydroalcoholic extract of wulnut leaves on blood factor changes of LDL, HDL, trigly ceride and full cholesterol in female hypercholestrolemic rabbits; effect of different biofertilizers on some physiological of three ecotypes of hemp under saline soils and saline waters; evaluation the response of inoculation black cumin seed (nigella sativa L.) with azospirillum and azotobacter; effect of spraying amino acid on thymoquinone, carvone and yield of black cumin (nigella sativa L.); the effect of salinity stress on germination and plantlet growth of safflower medicinal plants genotypes; inhibitory effect of medicinal plant aqueous and ethanolic extracts on alternaria solani mycelial growth; solvent effects on extraction and determination of the isoflavone daidzein in soybean and its extracts by high-performance liquid chromatography; howthorn berries hydroalcoholic extract with high triterpenic acid content reduces the

experimentally-induced colitis damages in rat; in vitro establishment and control of browning in seedless berberis vulgaris; effect of different nursery bed on lavandula's marcotting; the effects of allium hirtifolium boiss. on cardiovasicular risk factors in hypercholesterolemic rabbit; comparing various methods of seed and embryo culture and charcoal effect in optimizing in vitro culture of ferula assa-foetida; comparativ pollen morpholoy of the genera allium and calochortus of order liliales; the effect of salinity stress on seed germination and seedling growth indesert rod (eremostachys laciniata (L.) bunge); the antibacterial effect of the total methanol extract of the petal and stamen of saffron flowers (crocus sativus) against five bacterial food borne strains; allelopathy effects of lavender, absinthium and walnut on germination and growth of convolvulus arvensis, portulaca oleracea and triticum aestivum; protective effects of ocimum basilicum L. (basil) on electrocardiogram, cardiac function and histopathology in isoproterenol induced myocardial infarction in rats; study of the medicinal plants biodiversity species of dashtestan county in bushehr province; determination of total phenolic content in two extracts from cruciferous plants and its correlation with their antioxidant capacities; study of the primary ethnobotanical of genaveh county in bushehr province; allelopathic effect of different concentrations of caraway essential oil on germination characteristics in amaranth and barnyardgrass; antibacterial activity of polyphenol and anthocyanin-rich extracts of thymus kotschyanus aerial parts; antioxidant activity of flavonoid-rich fraction from thymus kotschyanus aerial parts; effect of different levels of nitrogen fertilizer on essential oil component in "ducrosia anethifolia"; computational identification of novel conserved micrornas, and their targets in eucalyptus grandis; evaluation of digitalis nervosa performance in northern parts of Iran; allelopathic potential of galbanum different tissues on germination traits and preliminary growth of lambsquarters; effect of irrigation intervals and phosphorous content carvacrol and essential oils of thymus vulgaris L.; the role of the use of the phosphorus and duration of irrigation on yield and thymol of thymus vulgaris L.; the comparison between arbescular mycorrhizal and salicylic acid on some antioxidant compounds in ocimum basilicum L. under salinity stress; evaluation of different drying methods on essential oil and estragol contents of tarragon; comparison between foeniculum vulgare and vitex agnus castus on ovulation in three spot gouirami; design and fabrication of magneticnanoparticles for herbal medicine delivery applications; chemical composition and biological activites of phlomis rigida labill essential oil; polymer coated magnetic nanoparticles as a novel carrier in curcumin nanomedicine; effect of altitude on the rutin and chlrojenic acid content of sambucus ebulus leaves in golestan province; the effect of irrigation interval and plant density on the amount of active ingredient linoleic acid and oleic acid in the oil of black cumin (nigella sativa); the effect of drought stress on some biochemical and physiologicalparameters of the lippiacitriodora; silymarin regulates pharmacokinetic of atorvastatin in diabetic rats; effect of salicylic acid and nitric oxide on germination and subsequently seedling growth of borago officinalis under drought stress; determination the critical period of weed control in medicinal plants of safflower (carthamus tinctorius) cultivar sofe in the arak; determination of heavy metals in lycium ruthenicum murry plant; effect of magnetic field and nano-particles of titanium dioxide (Tio<inf>2</inf>) on seed germination and seedlings early growth of ajowan (ammi copticum L.); effect of Si nano-prticles and magnetic fields on seed germination and seedling growth characteristics of (securigera securidaca L.); determination of total phenolic, flavonoid contents and antioxidant activity in aqueous and alcoholic extracts of crocus sativus L. stigma; effect of different nitrojen sources on quantitative and qualitative charactrictics of parsley (petroselinum crispum mill.) in jiroft region; woody branch and leaf anatomy of two subspecies of fraxinus angustifolia vahl.(oleaceae) in Iran; the effect of nutrition with microelements on yield of rosa damascena mill; the application of medicinal plants, antibiotic and their effects on serum composition in broiler chickens; effect of bio-fertilezers and micronutrients on germination characteristics of ajowan (carum copticum); effect of hydroalcoholic effect of citrullus colocynthis fruits on cysts of giardia lambia in invito; evidence of antifungal activity of madder (rubia tinctorum L.) on some fungal plant pathogens; diversity of chemical compositions of the essential oils of wild populations of myrtus communis L from khuzestan and lorestan provinces, southwest Iran; antimicrobial effects of zingiber officinale; extraction of volatile compounds of thymus vulgaris L. by microwave radiation and comparison with hydrodistillation method; response of costmary (tanacetum balsamita) to foliar application of urea and

amino asids; influence of iron on the accumulation of some medicinal compounds in parsley; evaluation of cytotoxic effect of nanoliposomal 6-gingerol on breast cancer MCF-7 cell line; evaluation of gingerol extracted from zingiber officinale against breast cancer; effect of growth regulators on callus induction in saffron; fumigant toxicity of two essential oils on the mediterranien flour moth, ephestia kuehniella zeller and identify of their chemical component; effect of different drying methods on drying time and essential oil content of anise hyssop (agastache foeniculum L.); chemical constitutes of the essential oil of tanacetum kotschyi (boiss.) from kallar mountain; chemical composition of the essential oil of heracleum lasiopetalum boiss leaves; chemical composition of the essential oils of wild populations of myrtus communis L from chaharmahal va bakhtiari provinces, Iran; red clover hydroalcoholic extract with high phenol content scavenges free radicals; the parthenolide concentration of tanacetum parthenium in culture condition; a study on trace elements and heavy metals purchased in camel'S thorn manna, willow manna, pocks pray manna, oak manna from selected market in Tehran; effect of salicylic acid and salt stress on organosulphur anticancer compound in broccoli sprouts; investigation the cardinal temperatures of sagebrush (artemisia abrotanum) and artichoke (cynarascolymus); the effects of time harvesting and irrigation intervals on the active ingredient of stinging nettle (urtica dioica L.) leaf; effect of shallot extract on fat quality of silver carp (hypophthalmichthys molitrix) paste during frozen storage; the effects of mycorrhiza and thiobacillus inoculatuon and sulfur application on garlic (allium sativum) growth; analgesic property of aqueous extract of ajuga chamaecistus ssp. tomentella; analysis of diosgenin in wild yam extracts by high-performance liquid chromatography; evaluation of UV-B effects on morphological and physiological characteristics of two cultivars of coriander (coriandrum sativum L.); determination of fatty acid profile in the oils of cydonia oblonga and mespilus germanica by NMR techniques; comparative survey effects coriandrum sativumand ziziphora cliniopodiodes powder in dietary onrbc, HB, HCT in common carp (cyprinus carpio); furanocoumarins from root of prangos ferulaceae; performance and blood parameter of broiler chickens given clove powder and essential oil reared under heat stress; study the effect of salt stress on some morphological and biochemical parameters of artichoke under invitro conditions; the study of different hormons level in callus production in garlic (allium sativum) tissue culture; evaluation of phenolic compounds contents and antioxidative activity in leaf and seed of (peganum harmala L.); effec of pectic acid (PA) on induction of apoptosis via no release in human prostate cancer cell line DU145; hypoglycemic effect of hydroalcoholic extract of parstinaca sativa seeds in normal and streptozotocin induced diabetic rats; effect of apple pectin or pectic acid and modified citrus pectin on no release and inhibition of cell proliferation in rat pituitary tumor cells GH3/B6; hypolipidemic effect of hydroalcoholic extract of parstinaca sativa seeds in normal and streptozotocin induced diabetic rats; stem anatomical structure in stellaria (caryophyllaceae) in Iran; effects of hydroalcoholic extract of parstinaca sativa seeds on activity of liver enzymes in normal and streptozotocin induced diabetic rats; assessment of salinity tolerance in Iranian fennel landraces in seed germination stage; effect of seed priming by salicylic acid on germination improvement and seedling growth parameters in garden cress (lepidium sativum) under saline conditions; investigation of different concentrations of Fe ions on rosmarinic acid biosynthesis in melissa officinalis; assessment of drought tolerance in Iranian fennel landraces in seed germination stage; role of mucilage in germination of medicinal plants; investigation of flavonoid content and anti-oxidant enzymes activity in trestedmelissa officinalisseedling with Fe ions; study of some characteristics related to primer after using rapd marker in order to evaluation of genetic diversity among cuminum cyminum L. accessions; the evaluation of vitamin C, anthocyanin and flavonoid in three cultivars of pomegranate in mazandaran provice; in vitro evaluating the effect of heavy metals on germination and growth parameters of some medicinal plants; study the effect of seed priming by plant growth regulators on seed germination and seedling growth criteria in matricaria aurea; the effect of hydro alcoholic extract of glycyrrhizaglabra on some electrocardiogram parameters and its interaction with nitric oxide system of male rat; the effect of campylobacter jejuni vaccine and extract of echinacea purpurea on colonization of campylobacter jejuni in gastrointestinal of broilers; the effect of organic acid, probiotic, and echinacea purpurea application on campylobacter jejuni colonization in gastrointestinal of broilers; effect of resvaraterol on teratogenecity in experimental model of preeclampsia in rat; microwave and ultrasound assisted hydrodistillation of

rosemary antioxidants and comparison with conventional hydrodistillation; antibacterial activity of salvia limbata essential oil; nano Cuo and Zno application affect phenolic compounds production in licorice seedlings; evaluation and comparison of anti-inflammatory and analgesia effects of three plants tanacetum parthenium, anethum graveolens L., apium graveolens (celery); effect of organic and chemical fertilizers on yield and essential oil on two savory (satureja hortensis L.) ecotypes, under drought stress condition; effect of aqueous and ethanolic extracts of nigella sativa seeds on milk production in rats; study the effect of natural compounds and essential oils of medicinal plants on improving maintenance of fresh cut cucumber; study of cell cycle changes in human prostate cancer cell line DU145 after treatment with combination of beta-glucan and doxorubicin; the effects of different temperatures and osmotic potentials on germination of scrophularia striata; effect of melissa officinalis hydro alcoholic extract on liver enzymes ALP, AST, ALT in mice; effects of echinacea purpurea, levamisole and propolis on serum biochemical metabolites in broiler chicks; effect of nanosilver particles on medicinal plant germination index of cumin (cuminum cyminum); effect of phytobiotic collected by honey bee on intestine morphology in broiler chicks; the effect of information and communication technologies (ICT) and technology on sustainable agriculture; analysis of the effect of different concentrations of Fe ion on the biosynthesis pathway of sulforaphane in lepidium draba seedlings; isolation and determination of sulforaphane from lepidium draba; biomass and essential oil content of spearmint (mentha spicata L.) harvested in different months in semi tropical climate; the effect of salt stress on aloe vera; effect of nitrogen different levels on yield and mucilage content of isabgol (plantago ovata L.); changes in essential oil content of myrtle myrtle (myrtus communis) during different months of year in ahvaz condition; evaluation of qualitative and quantitative yield of isabgol affected by different vermicompost levels; optimization of atropine extraction process from atropa belladonna by modified bubble column extraction with ultrasonic bath (BCE-UB) method; effect of salicylic acid on quality and essential oil componets of moldavian balm (dracocephalum moldavica L.); the study of two ecotypes of german chamomile (matricaria chamomila) in climatic condition of ahvaz; study of seed and biological yield and mucilage content of isabgol affected by different cow manure amounts; effect of arbuscularmycorrhiza on content of essential oils in mint; phylogeny of tanacetum L. sect. xanthoglossa based on CpDNA Ndhf-Rpl32 spacer sequences data; a new method based on the UV-visible spectroscopy for quantitative analysis of atropine in biological extracts; inhibitory effect of helichrysum arenarium L essential oil on growth of food contaminated fungal; marketing the medicinal plants products based on its qualities; antifungal activity of essential oil of ziziphora clinopodioides L; liquoric triterpenoids transport via CaCo-2 cells monolayer; phylogenetic relationships of some spiny astragalus (astragalus, fabaceae) using nrdnaits sequences; silymarin down regulated the varicocele-induced protein oxidation and E2F1 exxpression in the tetis; pollen morphology of some silene species of lasiostemones section in Iran; effect of different cultivars on naringin and hesperidin flavonoides contents in different fruit parts on citrus aurantium rootstock; a study on total chlorophyll content in leaves of daucus carota L. grown in two provinces of Iran and its correlation with some meteorological parameters and carotenoids levels; evaluation of agronomic characteristics, seed germination mass of thyme (thymus vulgaris L.) by gibberellic acid and salicylic acid; comparison of total phenolic contents in three infusions of black tea; antifungal activity of the essential oil of salvia officinalis; effect of deficit irrigation and salicylic acid on free proline and some of physiological characteristics of basil (ocimum basilica L.); study the effect of strip intercropping patterns on morphological characteristics of bean and dill in tabriz region, Iran; effect of strip intercropping on leaf area index of bean (phaseolus vulgaris) and dill (anethum graveolens); germination improvement in tanacetum polycephalum; evaluation of medicinal organs of plant species in miankaleh; ecological studies of salvia sahandica; evaluation of medicinal flora in summer rangeland of arjmand in firozkoh; evaluation of medicinal flora in summer rangeland of arjmand in firozkoh; a new avenue for prediction of pseudo chamomile using decision tree; effect of salinity treatment on colocynth seedling growth; enzymatic treatment of aloe vera gel to reduce viscosity for pharmacutical applications; effect of potassium nitrate primingon seed germination of colocynth; the effects of bio-fertilizers and bio-stimulators on chlorophyll content and leaves properties of ocimum basilicum L.; study of ocimum (ocimum bacilicum L.) germination attributes and seed vigor under

salinity stress; the effecte of drought sterss on germination of thymus species (T. Daenensis, T. Eriocalyx, T. Vulgaris); the effects of bio-fertilizers and bio-stimulators on morphophisiological properties of ocimum basilicuml; fumigant toxicity and median lethal time (LT50) on the immature stages of mediterranien flour moth, ephestia kuehniella zeller; fumigant toxicity and persistence of two medicinal plant essential oils from laurus nobilisand myrtus commonisonagainst adult stages of mediterranien flour mothephestiakuehniella zeller; the effect of Pb on leaf of matricaria chamomilla in vegetative and reproductive stages; effect of different concentrations of colchicine on ploidy levels and morphology of dracocephalum kotschyi boiss; application of natural essential oils, silver and copper nano-particles to extend the vase life of two carnation cut flower cultivars; effect of some bio and chemical fertilizers on some morphological characterestics and percent of root colonizationof dill (anethum graveolens L.); evaluation of different sowing dates on yield and yield components in saffron (crocus sativus L.); the effect of elicitor methyl jasmonate on secondary metabolites of medicinal plant pot marigold(calendula officinalis L.); effect of coronatine pretreatment in basil plant(ocimum bassilicum)subjected to arsenic toxicity on difference phenolic compounds and pal activity; study of yield and yield components in different ecotypes of saffron (crocus sativus L.); effect of coronatine pretreatment in basil plant (ocimum bassilicum); micro-morphological study of mericarp and seed in different erodium (geraniaceae) species of Iran; the effect of plant density and date of planting on total phenol and flavonoid of artichoke (cynara scolymus L.) in gorgan and ilam conditions; selenium improves growth and antioxidant defense system in melissa officinalis; interaction of the auxin hormoneand rooting media in cuttings of the medicinal plant myrtus (myrtus communis); the influence of exogenous aba on photosynthesis and antioxidative enzymes activity in melissa officinalis; the effect of application of phosphorus fertilizer and mycorrhizal fungus on yield, yield component and effective material ofpot marigold (calendula officinalisl.); the effect of different sugar on rosmarinic acid production in salvia reuterana hairy root culture; cytotoxicity effects of scorzonera grossheimii lipsch. & vassilcz extract on hela cell line and Mcf-7 cell line; evaluation of in vitro culture of mohr-E khosh medicinal plant species; the effect of antioxidant attributes of aqueous garlic extract in mice; evaluation of mohr-E khosh (zhmeriamajdaerech. F. &wendelbo) tissue culture; effect of bap hormone treatment on in vitro shoot regeneration and proliferation of medicine herbhenbane lattice (hyoscyamus reticulatus L.); antioxidant activity of two sea cucumber species and brown algae from persian gulf; comparison of 1,8-cineole in the essence of four wild populations of yellow yarrow (achilleawilhelmsiic.koch) in fars province; the effect of planting date and harvest stage on growing indexes and percentagethymolin saturejahortensis L; chemical analysis of hops (humulus lupulus L.) extract collected from zarrin gol zone, golestan province, Iran; local effect ofeugenol oilon the skin woundhealingin rat; influence of manure, compost and biofertilizer on growth and yield of ajowan (trachyspermum ammi sprague); variation of rutin content in caper leaves during heir phenological cyces; the changes of hypophysys hormones in pcos rats that treated with aqueous fennel extract; the effect of aqueous and methanolic extract of caper leaf and GA<inf>3</inf> on germination of capparis spinosal; effect of density on quantity characteristics of thmusspecies (T. Daenensis, T. Eriocalyx, T. Vulgaris) indryland condition of kermanshah; autecology and phenology study of salvia leriifolia; hairy root cultures of salvia reuterana transformed with agrobacterium rhizogenes; comparison of salvia (salvia sclarea L.) accessions according to morphological traits, essence yield and chemical compounds; the evaluation effects of plant density and sowing dates on yield and yield components of black cumin (nigella sativa) under ilam climate condition; investigation on morphology and root yield of chicory (C. Intybus) landraces for inulin production; effect of eugenol in the context of ethanol teat microbial load on dairy cow; the effect of slope direction on morphological characteristics of juniperus polycarposc.koch needels; effect of thymol and carvacrol on two cultivars of cut gerbera flowers vase life; influence of arbuscularmycorrhizal fungi and salt stress on essential oil content of summer savory (satureja hortensis L.); influence of arbuscularmycorrhizal fungi on growth and morphological characteristicsof summersavory (satureja hortensis L.) plant under salt stress conditions; antimicrobial activity of five plant essential oils on bacillus sp.; study of protective effective of pollen in proportion to royal jelly on liver tissue in experimental polycystic ovary syndrome in adult female rats; curcumin nanomidicine; appliacations of beta-cyclodextrin in cuccumin

solubility enhancment; investigation of the effects of different rate of nitrogen and zinc on yield of chamomile (matricaria chamomilla L.); protective effect of parsley aqueous extract versus glyburide on diabetes-induced derangement in the ovary; evidence for follicular growth and biochemical alteration; phytochemical screening, antioxidant and burn healing potential of galium odoratumm ethanolic extract; evaluation hydroalcolic extract of plantago majorleaf on sperm count and FSH, Lhlevels in streptozotocine (STZ) induced diabetic rat; the effect of indole butyric acid (IBA) and naphthalene acetic acid (NAA) on stem cuttings of myrtle (myrtus communis L.); effect of hydroalcolic extract of descurainia sophia seedon sperm morphology and FSH, lhlevelsin streptozotocine (STZ) induced diabetic rat; determination of totalphenolic,flavonoid contents and inhibitory effect of euphorbia spinidens methanolic extract against HSV1; effect of sesameoil (sesamum indicum L) on sperm parameters in streptozotocine (STZ)- induced diabetic rat; improvement in germination and seedling growth of hyoscyamus squarrosusgriff; recognition and usage of medicinal plants according to the views of local communities (sample studying of top taleghan in alborz province); comparison of morphological and agronomical traits of fenugreek (trigonella foenum-gracum L.) under drought stress and biostimulatorsingreenhouse and fieldcrops; ffect drought stress and biostimulators on morphological traits of fenugreek (trigonella foenum-gracum L.); endometrial changes in pcos female rats that treated with aqueous fennel extraction; effect of priming on seed vigor and antioxidant enzymes activities in thyme (thymus vulgaris L.) under salinity stress; effect of potassium nitrate onsome germination traits of balango (lallemantiaroyleana L.) under salinity stress; comparison of the essential oil components in wild and cultivate population of salvia lachnocalyx; effect of irrigation intervals on yield and yield components of degen & Drfi (securiger securidaca L.); the anatomical properties of alyssum (sect. gamosepalum dudley); comparison of the essential oil components in wild and cultivate population of salvia verticillata; comparison of the essential oil components in wild and cultivate population of salvia virgata; the effect of different kind of salt on seed germination and seedling growth of nigella sativa L. and guizotia abyssinica cass; high-frequency in vitro direct shoots regeneretion from axillary nodal and shoot tips explants of clary sage (salvia sclarea L.); essential oil composition in stachys byzantina cultivated in Iran; antioxidant activities of the bark of pterocarya fraxinifolia L.; isolation and purification of terpenoids from aerial parts of echinophora cinerea; induction of salt stress resistance in foeniculum vulgar by application of hydro and halo seed priming; chemical composition of stem essential oils of pterocarya fraxinifolia L.; effect of sowing date and growing season on agronomical characters of isfahanian and indian black cumin; effect of different vermicompost levels and ecotype on growth parameters of basil (ocimum basilicum L.); the effect of bacterial inoculation on qualitative and quantitative yield of the aloe vera plant; triterpene constituents of euphorbia erythradenia boiss; evaluation of the effect of three biologic fertilizers on aloe vera plant; introduce some medicinal plants used for gastro-intestinal diseases in east-mazandaran region; histopathologic changes in rat liver treated with quercetin extracted from onion after infected by toxoplasma gondii; effect of growing media on rooting of stem cuttings in hana(lawsonia inermis L.); effect of colchicines treatments on some morphological and cytological characteristics of agastache foeniculum; antiradical, antioxidant and antimicrobial activities of crataegus elbursensis extracts; evaluation of somesecondary metabolitesinthree olivegenotypes and twoharvesting time; ovicidal activity of essential oils from three plants against mould mite (tyrophagusputrescentiae schrank); role of mycorrhizal fungi and salicylic acid in resistance of ocimum basilicum L. to aluminum toxicity; investigation of histological effects of humulus lupuluson ovarian tissue of female three spot gourami; phenolic acid analysis and antioxidant activity determination of froriepia subpinnata; study of antimicrobial effect thyme and mint essential oils and edta, on staphylococcus aureus; the effect of corn oil on liberkuhn glands goblet cells secrition activity in rabbit; effectsof elicitation onalkaloids production in suspension cell cultures ofpapaver somniferum; effect of plant growth regulators on in vitro culture of artemisia aucheri; effect of echinacea extract on parenteral lysozyme activity in serum of beluga (huso huso); survey of antimicrobial effect thyme and peppermint essential oils and edta, on salmonella typhimurium; total phenolic content, antiradical and antioxidant activities of eryngium caucasicum extracts; effects of plant growth regulators on callus formation fenugreek (trigonella foenumgraecum L) of in vitro; influence of different concentration of 2,4-D and kinetin on callus formation milk

thistles (silymbum marianum) plants; the effect of nitrogen fertilizer and plant density on quantitative and qualitative characteristics of castor (ricinus communis L.); evaluation of genetic diversity in some linseed (linum usitatissimum L.) genotypes using EST-SSR markers; effect of altitude on some of the morphological characteristic and chlorophyll content of nettle in mazandaran and golestan conditions; evaluation of primers indices used in the study of genetic diversity of papaver macrostemum ecotypes viaissr marker; studies on the amino acids, flavonoids and total phenolics in ziziphus jujuba; comparison study of antibacterial effect essential oils oregano and cumin and edta on salmonella typhimurium by disc diffusion and broth microdilution mic testing; comparison study of antibacterial effect oregano and cumin essential oils and edta on staphylococcus aureus by disc diffusion method and broth microdilution mic testing; the study of antioxidant activity of phenol compounds inartemisia fragranswilld.and artemisia vulgaris L.; impact of planting patterns on weed density, and growth characteristics of caraway; effect of drying methods on essential oil contents and citronellal of lemon balm; a comparison on effect of the thiobacilus biological fertilizer and superabsorbent on the morphological traits and essential oil yield of thymus vulgaris t. daenensis; investigation of effect of different doses of hydroalcoholic extract of glycyrrhiza glabra's rhizom on the mechanical activity of isolated trachea of male rat; aloe vera gelconcentration by reverse osmosis method (reduction energy consumption); the effect of drought stress on germination characteristics and preliminary growth of fleawort and purple coneflower; preparation of an herbal emulgel for treatment of hemorrhoids; effect of varying level of biological and chemical phosphors on same morphological traits summer savory (satureja hortensis L.) plant; study on the technical efficiency in rose water industray in city of kashan, Iran; the effects of corn oil on colonic mucosal thickness in rabbit; estimation of the milk thistle oil percent by using stepwise regression; the effects of mycorrhiza, thiobacillus inoculatuon and sulfur application on some physiological parmeters of garlic (allium sativum L.); the study of some medicinal-chemical characteristics in four olive cultivars; allelopathic effects of citrullus (citrullus colocynthisl.) extract on seed germination and seedling growth of ocimum (ocimum basilicuml.); the effect of polyamines (putrescin, spermidin and spermin) on growth, yield and essential oil of moldavian dracocephalum L.; effect of different density levels on marigold yield; allelopathic effects of citrullus (citrullus colocynthisl.) extract on seed germination and seedling growth of purslane (portulaca oleracea L.); sterols from nizamudiinia zanardinii, a brown alga of oman sea; analyzing of 4 medicinal plants essential Oil'S potential allelopathic activity on pigweed seeds (amaranthus retroflexus L) germination and growth; flavonol glycosides from paliurus spina-christi; physiological responses of anise hyssop (agastache foeniculum L.) to drought stress; potential allelopathicactivity of 4 medicinal plants essential oil on lamb's-quarters weed seeds (chenopodium album) germination and growth; humic acidcounteracts the ecotoxicological effects of arsenic on seed germination and seedling growth parameters of savory; effect of different planting beds on yield and yield components of garlic (allium sativum L.); the effect of cadmium on phenol and flavonoid contents in basil(ocimumbasilicuml.); yield and yield components of different species of lallemantia. Sp; effect of temperature androsemary (rosmarinusofficinalisl.) essential oils in potato sprout inhibition and tuber quality after post harvest; comparison of anti-inflammatory and analgesic activity of the artemisia absinthiumand its main component; improvement of antioxidant production in rosmarinus officinalis by tissue culture; two new dammarane type terpenoids from geum heterocarpum; absorption spectra of chlorophyll A and B and fresh weight of leaves in different ecotypes of lallemantia.Sp as affected by deficit irrigation; morphological investigation of hairy roots induced in hyoscyamus niger; germination of balangu (lallemantia royleana) as affected by hydropriming and germination temperatures; yield potential assessment of cumin ecotypes under irrigated and water-stressed conditions; investigation of grows rate and antifungal efects of ganoderma lusidum on plant pathogen karst (basidiomycota); effects of artemisia dracunculus on the clotting time; the effects of explants and growth regulators on callus induction of lippia citriodora L., an important medicinal plant; aquatic and alcohol extract effect consideration of equsetum arvens on the wound and skin inflammations amendment; the comparison the effects of humic acid and thiobacillusbiofertilizer on morphological characteristics on two species of thymus (T.Vulgaris and T.Kotschyanus); antioxidant activities of some pepper (capsicum annuum L.) varieties phenolic extracts; antioxidant and toxicological evaluation of hydroethanol

extract of trogpogon buphthalmoides aerial parts; aquatic and alcohol extract effect consideration of ephedra intermedia on the wound and skin inflammations amendment; study on different levels of annatto seed meal (bixa orellana) in the diet on some biological indices of rainbow trout (oncorhynchus mykiss); cytotoxic evaluation of 24-hydroperoxy-24-vinyl cholesterol isolated from nizamuddinia zanardinii, a brown alga from oman sea; effects of salicylic acid on total phenolic and rosmarinic acid contents in lemon balm (melissa officinalis L.) plants exposed to nickel stress; determination of total phenolic and scavenging activity of free radicals in 4 species fruits of solanaceae; determination of antioxidant activities of two adonis species; in vitrochangesof cholorogenic and cafeic acidsof artichoke under salin stress; effect of PGPR inoculation on the quality and quantity of summer savory (saturejahortensis L.); the economic result of tragacanth astragalus and sell product; two new ditepenoids from the root of salvia chloroleuca; effect of putrescine spraying on the quality and quantity of summer savory (saturejahortensis L.); effect of salicylic acid spraying on the quality and quantity of summer savory (satureja hortensis L.); study of physiological and biochemical responses of saffron (crocus sativus L.)to salt stress and alleviative effects of salycilic acid; the effect of selenium (So2) on ionic content of melissa ossicinalis; of gene flow and genetic differentiation among populations of species anthemis tinctoria using peroxidase isozymes; evaluating the germination of artemisia populations in different temperatures and polyethylene glycol; study of physiological and biochemical responses of saffron (crocus sativus L.) to drought stress and alleviative effects of salycilic acid; a study of generative organs characteristics of avicennia marina (forsk.) vierh (avicenniaceae); histophatological changes of spleen in pcos female rats treated with aqueousextraction of foeniculum vulgare; semi-preparative LC-MS of taxane diterpenoids; influences of drought stress on seed germination parameters in (ruta graveolens L.); fabrication of albumin nanoparticles contains model drug; optimization of in vitro regeneration of some salvia species via nodal explants culture; medicinal and antioxidant properties of kernel and green shell a mong some pistachio genotypes; comparison of chemical constituent of essential oil of stachys lavandulifoliavahl from kaboodarahang and roodsar; effect of ecotype on total phenol and flavonoids content of sambucus ebulus leaves; anticancer activity evaluation of the acinosgraveolensaerial parts; phenotypic variation of colocynth accession from different Iran geographical area of (citrullus colocynthis); phenolic content and DPPH radical scaveningactivity and total protein of cucurbitaceae in Iran; the effect of water deficit and spraying on agronomictraits and yield of dragonhead; investigation of anti-inflammatory effect of N--hexane extract of leaves of ziziphora clinopodiodes.lam on NMRI male mice; evaluation of the antioxidant activity of the acinosgraveolensaerial parts from qamsar area; the relation of traits in artemisia of Tehran Province, Iran; study of different drying methods on essential oil and menthol contents of peppermint; genetic diversity among naked seed of cucurbita pepo var. styriaca and comparison with other varieties of pepo species; effect of osmopriming with Kno3 on seed germination of lallemantia royleana; study on seed morphological markers of naked seed and other cucurbits to evaluate genetic variation; comparison of the effects of drought and salinity stress on fennel seed germination under hydropriming condition; evaluation of allelopathic activity of juniperus sabina; effect of ethanolic extract of barberry root (berberis vulgaris (on renal toxicity of the drug cisplatin; callus induction from different parts of milk thistle(silbum marianum L.); anticancer activity of nigella sativa; radical scavening activity and total phenolic content of three species of pear(pyrus. L); effects of various salts on the germination of silybum marianum; evaluation phenol and flavonoid level in seven genotypes of olive maturity; allelopathic potential of common mallow (malva sylvestris) on the germination and the initial growth of blanket flower, Cock'S comb and sweet william; mathematical study of dorema aucheri extraction with supercritical carbon dioxide; cheminformatics study of natural thujone like compounds for pharmacologic activity; application of response surface methodology for the optimisation of ultrasound assisted emulsification microextraction of fatty acids from pomegranate seed; study effect of parsley (petroselinum crispum) as an abortifacient on pregnant rats; phytochemical study on dichloromethane extract of artemisia ciniformis; comparison of the effects of drought and salinity stresses on linseed seed germination under hydropriming condition; salicylic acid and salinity effects on proline content and growth characteristics in thymus daenensis; optimization of ultrasound assisted emulsification microextraction for separation of fatty acids of Iranian (bandar abbas)

jatrophacurcus seed; effects of dietry cinnamon oil (cinnamomum verum) supplementation on growth performance in Japanese quail; phytochemistry study on medicine plant of artemisiasieberi and assesind its allelopathic effect on agropayrum elongathum seeds; optimization of media for in vitro callus growth of taxus baccata; optimization of sterile treatmentsfor in vitro culture of taxus baccata and T.Brevifolia; identification and medicinal characteristics investigation of some of the most important medicinal trees, shrubs and grass in lorestan province (case study in yaftehkouh, khorramabad); haploid induction in medicinal pumpkin using gamma irradiated pollent technique; effect of thymus extract on meat quality in Japanese quail chicks; the effect of chamomile extract on reproductive system in male mice; the effec of biological and chemical nitrogen fertilizer on dry flower yield and essential oil content of calendus (calendula officinalis); yield potential evaluation of different cumin ecotypes in different winter sowing dates; antibacterial activity of eremurus persicus boiss. leaves and flowers; effect of leave kind on the secondary metabolits certain in olive (olea europaea L.); extraction and identification of a new ester coumarin from ferula orientalis roots; the effect of different levels of vermicompost on nutrients balance of dracocephalummoldavical; a new PH-responsive polymer coated magnetic nanoparticles for loading and delivery of quercetin; the study of genetic parameter related of salinity tolerance in sofflower; amino-silane modified magnetic nanoparticles for loading and delivery of chlorogenic acid; study of correlation between yield and yield components of cumin under different irrigation intervals treated with iron chelate nano fertilizer; evaluation of effect attract moisture substances and organic fertilizers on quality and quantity yield of purslane (portulaca oleracea L.) in ahvaz region; gene mapping of quanthitative traite for salinity tolerance in safflower; changes in the amount of essential oil eucalyptus species grown in qom and behshahr, and its relation to morphological characteristics of leaves; study of antimicrobial effects of narcissus jonquilla essence on common gram positive and negative bacterias (E.Coli, B.Cereus, S.Aureus); the effect of different levels zeolite on carotenoid and chlorophyll of calendula officinalis L.; the effect of lettuce hydro alcoholic extract on some blood parameters in mice; designing of herbal based inhibitory bioactive molecules for vegfr in angiogenesis; the effect of harvest time and density on essence yield of biennial tarragon (artemisia dracunculus L.); study effect of organic, inorganic fertilizers and cutting on agronomic characteristics in common purslane(portulacaoleracea L.); influence of calciumnitrateon the change of morphological characteristicsand mucilage content of borage; effects of drought stress induced by polyethylene glycol on germination and morphophysiological characteristics ofdracocephalummoldavica; study of the chemicalcharacteristics of somepomegranate cultivarsin mazandaran and khorasan; the effect of optimum planting date and harvest stage on essential oil of saturejahortensis in saveh; the effects of boric acid and seed osmopriming on germination and early seedling growth of petroselinum crispum; antioxidant activity of some extracts from aerial parts of ajuga chamaecistus Ssp. tomentella; evaluation of silver nanoparticles influence on abscission and oil content ofseed borage; effect of priming with polyetilene glycol and NaCl salinity on germination herb purslane (portulacaoleracea L.); effect of altitude on some of the secondary metabolits of nettle in golestan and mazandaran conditions; Effectofsowingdateandpatternongrowthphysiologic Al parametersof purslane (portulaca oleracea) under ahvazclimaticconditions; study on the tissue damage of oral administration of different doses of zataria multiflora essential oil in persian sturgeon (acipenser persicus); effect of hormons and explant in callus induction and shoot organogenesis in tissue culture of echinacea purpurea; antiaging effects of glycyrrhiza glabra, hypericum perforatum, silybum marianum and mixture of them on D-galactose induced aging in male mice; assessment of some biochemical parameters in two rosa damascene mill genotypes in dry cold weather conditions (case study of semnan city); comparison of antioxidant properties mentha longifolia L. hudson var.chlorodictya rech.F. in sabzevar and gorgan; effect of growth regulators, explants source and light/ dark condition on in vitro callus growth of artemisia vulgaris; applicability of flavonoid spot profiles in taxonomic circumscription of fritillaria L. species in Iran; optimalization suspension culture of medicinal plant artemisia deracunculus; he effect of salinity on germination factors and growth of five medicinal plants (carthamus tinctorius, carum carvi, sesamum indicum, foeniculum vulgare and cultivated endive); investigation of exclusive and synergistic antibacterial activity of edible medicinal vegetables; kinetic

study of mechanism of an enzymatic reaction catalyzed with esterase enzyme; the concentration of parthenolide in native tanacetum parthenium; investigation on the effect of hormonal regulators on the adventitious shoot and root regeneration in artemisia vulgaris; effects of aloe vera cream on healing diabetic foot ulcer; antibacterial potential of some Iranian medicinal plant extracts on pseudomonas aeruginosa; survey of callogenesis by two artemisia species (artemisia vulgaris and artemisia deracunculus); enhancement of flavonoid content by squalestatin and methyl jasmonate in cell suspension culture yew; screening of anthbacterial effects of aerial shoot extracts from some medicinal vegetables; the correlation between malone dealdehyde (MDA) and proline content and stigma-like structures (SLSS) in tissue culture of saffron; a survey on the antibacterial properties of the achille millefollium against some pathogene bacteria; effect of biological and chemical fertilizer on morphological characteristics in two basil (ocimum basilicum L.) landraces; effect of cinnamomun zeylanicum neeson LH and estrogen in female rats; effect of arbuscularmycorrhizas on metals absorption on three genotype of mentha spicata; comparison the antibacterial activities of ajowan, black zira and cinnamon essential oils using agar diffusion method; investigation of mentha pulegium L. effects on broiler chickens; the economic estimate of the biological and chemical fertilizers cost toward biomass and essential oil yield in two basil (ocimum basilicum L.) landraces; expression profile of some genes involve in nicotiana benthamiana alkaloid biosyntesis pathway under abiotic stresses; ethnobotanical study of medicinal plant of sirjan district, province Kerman; evaluating antibacterial property of eucalyptus essence on superficial sores of grass carp (ctenopharyngodon idella) juveniles' skin; evaluation effect of medicinal plants intercropping with garlic (allium sativum L.) on garlic yield in ahvaz conditions; the effects of lead heavy metal on purslane (portulaca oleraceae L.) seed germination and seedling traits; effect of drought stress and plant growth promothing rhizobacteria (PGPR) on physiology basil herb; the effect of salviaofficinalis on lipid peroxidation of kidney tissue in diabetic rats; study the ethnobotany of medicinal plants in arsanjan, fars province; study of in vitro culture in foeniculum vulgare mill explants; investigation of rutin content in black henbane (hyoscyamus niger) seeds from three different regions of Iran; effect of different drying methods on quality of artichoke leaf; the effect of magnified salin water on the phenolicsand flavonoids compoundsof artichoke leaves; effect of salicylic acid and salinity on morphological characteristics in mentha piperita L.; the study of phytochemistry and ecology of origanum vulgar plant in the region of mazandaran province; the effect of arbuscular mycorrhizal fungi on some growth factors and photosynthesis pigments of juniperus excelsa. M.Bieb.; the effect of vermicompost and nano chelated iron fertilizer on yield and growth of safflower; antioxidant activities of fractions from different parts of mangrove plant avicennia marina (forsk.)vierh.; evaluation antioxidant activity of leaf and seed extracts of pimpinella anisum; the effect of worm tea and nano iron fertilizer on saffron flowering; comparative study of total phenolic contents and antimicrobial activities for flowers, leaves and stems of sophora mollis backer; the effect of sowing dates on growth, yield and essential oil content ofocimum basilicum L.; antioxidant activity of methanol extract from aerial parts of sophora mollis backer from kashan; effects of Fe and Zn foliar application on growth thymus vulgaris L. and contents of thymol and carvacrol; green synthesis of silver nanoparticles using scropholaria striata L, thymus daenensissubsp. lancifolius and artemisia annua extracts; expression profile of some genes involve in nicotiana benthamiana alkaloid biosyntesis pathway under abiotic stresses; study on the potential of vitex pseudo-negundo to regulate the esteroid hormone levels of rainbow trout (oncorhynchus mykiss) broodstocksfed with fishmeal-free diets; total phenolic content in gum tragacanth of astragalus gossypinus and astragalus parrowianus; effects of UV on anatomical structure in viola tricolor; the effect of biological fertilizer on essential oil weight percent and yield of thymus pubescence; field evaluation of nanoencapsulated cuminum cyminum essential oil on citrus red mite; evaluation of antioxidant compounds of physalis alkekengi in different phenolegical stages; comparative analysis of headspace volatiles of Iranian damask rose genotypes (rosa damascena mill); prediction of rupture force and shrinkage for terebinth fruit in infrared dryers using artificial neural networks; study of UV effects on flavonoids content in viola tricolor; comparative germination characteristics and initial growth in tow cultivars of basil (ocimum basilicum L.) under drought stress; antioxidant activity of methanolic extracts of leave, stem and flower of

dorema aucheri; effect of salt stress on germination and seedling growth of fennel (foeniculum vulgare. mill); growth analyse of dill influenced by strip intercropping with bean; study on the antimicrobial effect of extracts of stigmas and stamens of saffron on the growth of staphylococcus aureus in hamburger; comparison of chamical components and yield of the essential oil of mytleleavesunder drying methods; formation of a plant database for tubercular therapy; the effect of inoculated seeds with arbuscular mycorrhiza fungi on essential oil compounds of thymus pubescence; in vitro anthelminthic activity of tobacco extracts against marshallagia marshalli; anatomical, physiological and morphological variation of different colocynth accession seeds; the effect of kaempferol and G alangin on serum paraoxonase activity in rats; study of methanol extract activity of cuscuta Ssp. from alhaji hostplants on human lymphocyte cells; study of the effect of 200 Mg/Kg dose of saffron extract on eosinophil changes in environmental blood circulation of rat'S with experimental asthma; the effect of salinity on seed germination and plant growth parameters of the vitex of a drug (vitex agnus-castus); the effect of thiamethoxam and plant extracts on biological parameters of chrysoperla carnea (stephens) (neu. chrysopidae) in iaboratory condition; study of coumarin precence and amounts of total flavonoids in yellow gerberas; effects of chemical scarification and growing medium on seed germination and seedling prformance of myrtus communis L.; study of shoot dry yield, morphological and essential oil content in six satureja rechingeri populations grown intehran, Iran; investigation of methods for application of medicinal plants in different areas at different altitudes of Iran; effect of exogenous nitric oxide application on seed germination improvement of eastern purple coneflower (echinacea purpurea L.) under salinity stress; biotransformation in artemisiaaucheriboiss. suspention culture; phytochemical study on polar extract of artemisia incana (L.) druce; effect of harvesting time on secondary metabolites of saffron; insecticidal activity of capsulated tablet form of artemisia siebrion sitophilus oryzae; anti-bacterial properties ofethanolextracts ofalgae (entreromorpha intestinalis, cystoseira myrica, gracilaria corticata) against the bacterium salmonella typhimurium (PTCC1596); the onion effect onepisiatomy wound healing; evaluation of planting arrangement and straw mulch on yield and yield components of pumpkin under relay intercropping with chickpea; study on the biological activities of essential oils in vitex pseudo-negundo and calotropis persica; effect of chemical and biological fertilizers on vegetative characteristic of saffron corm (crocus sativus L.); the phylogeny of tribe rumiceae (polygonaceae) based on nuclear ribosomal DNA its sequences; effect ofessential oils to extend vase-life of lilium cut flower; in vitro anthelmintic avtivity of artemisia santolina against haemonchus contortus; effects of different manganese treatments on some morphological parameters of cuminum cyminum L.; effect of fermentaion and inorganic acids treatments on removing musilage layer of cordia myxa seeds; a new coumarin ester from ferula persica roots; phytochemical investigation of acantholimon collare plant mey native of south khorasan province; the effect of lavender ethanolic extract on learning and memory in rat; essential oil constituents of several organs of fennel (foeniculum vulgare var. vulgare) under ahwaz climatic condition; the effect of water deficit stress on geranial and methyl chavicol as main compounds of essential oils in three ecotypes of basil (ocimum basilicum L.); phenolic compounds from two cultivars of olive leaves collected in tarom and rudbar and effect of harvesting times in golestan province; study of chemical profile of anthocyanins as a part of influential compounds in purple - blue flowers of centaurea cyanus; the effects of drying methods on essential oil content and appearance characteristics of thymus vulgaris, hyssopus officinalis L. and lavandula angustifolia; comparison of phenolic compounds and antioxidant activity of 6 medicinal pasture plants in methanol and ethanol extracts by HPLC and spectrophotpmetry; drug effects of artemisia plant essential oil on some dermato infectious bacteria; chemical analysis of the essential oil of two mentha species (mentha aquatica and mentha spicata) and evaluation of the antioxidant activities and antimicrobial activities; effects of water deficit and prolinfoliar application on morphological characteristics of german chamomil (matricaria chamomilla L.); investigating the effects of the chemical-physical properties on the performance and composition of essential in the stachys lavandulifolia. vahl; cytotoxic evaluation of haplophyllum robustum against hela cells; effect of different levels of nitrogen and water deficit on morphological characteristics and antioxidative enzymes of pot marigold (calendula officinalis L); optimization of plant cell suspension cultures of garlic (allium sativum); evalution the yield and yield components of cumin landraces (cuminum

cyminum L.) as affected by the bio--fertilizer under drought stress; investigating the effects of the chemical-physical properties on the performance and composition of essential in the tanacetum polycephalum schultz-bip. polycephalum; seed germination in alderbuckthorn (frangula alnus mill); introducing the flora and chorology medicinal plants in summer rangelands of sari; effect of biological and chemical fertilizers on morphology,yield and land equivalent ratio in mixed cropping of alfalfa and fennel; histological and histocheical study and the effect of fennel on the structure of kidney in alloxen-induced diabetic rats; medicinal plant and resistive economy; effect of priming with polyethylen glycol and drought germination herb purslane (portulaca oleraceae L.); identification of medicinal plants in ghareche region, northeastren of khorasan, Iran; the effect of dorema aucheri- hydroalcoholic extract on Lipid Factors (LDL, HDL, VLDL, TG and Cholestrol) in STZ-nicotinamide induced type 2 diabete in male rats model of diabetes; investigation of floristic, life forms and chorotype of medicinal plants of summer rangelands of noor mazandaran; comparative study of antioxidant activity of polar and non-polar extracts from aerial parts of salvia ceratophylla L.; effects boron and nitrogen on growth and quantity yield of purslanein ahvaz region; bioassay study of saffron extract'S allelopathic effects on quantitative and qualitative traits of some of medicinal plants; the effect of planting pattern on weed diversity and some physio-morphological characteristics of black cumin (bunium persicum L.); investigation of marigold allelopathic effect on weed composition and diversity of tomato in an intercropping system; direct adventitious shoot induction and plant regeneration form shoot apex explants of fennel (foeniculum vulgare miller); adventitious shoot formation in decapitated dicotyledonous seedlings of scrophularia striata; increased production of sesquiterpenes in hairy root cultures of teucrium chamaedrys by elicitation with chitosan; indirect adventitious shoot induction and plant regeneration form leaf explants of valeriana officinalis L.; autecology of rhubarb (rheum ribes) in yazd province; the essential oil composition of origanum vulgare L. subsp. gracile at different developmental stages; investigate on the possibility of improving the quality and quantity of essential oil peppermint with a change in the extraction system; green synthesis of silver nanoparticles using crocus sativus petals extract; effect of drought stress on scrophularia striata; calendula officinalis methanolic extract used as green synthesis of silver nanoparticles; development of an innovative herbal beverage from soymilk -bilberry juice; priminary study of some secondary compounds in the extract of atriplex cansenses and evaluation of its allelopathic impacts on agropayrun elongatum seed; examination of antioxidant activity of Iranian walnut's green husk; effect of drought stress and different planting dates on yield and quality of safflower; germination characteristics of the medicinal plant pumpkin (cucurbita pepo) caused by drought stress caused by polyethylene glycol 6000 and salinity stress caused by sodium chloride; investigation of phytochemical some of the aromatic plants (15 species) from lamiaceaefamily in province of mazandaran; nanoemolsification salvia officinalis essential oil for topical delivery; phylogenetic relationships between members of the genus teucrium L. in Iran; harvest time effect on the herb yield and essential oil content of sweet basil(ocimum basilicum L.); antioxidant and free radical scavenging activity of methanolic extract of wild stachys lavandulifolia (vahl.) populationin Iran; investigation of marigold allelopathic effect on insect diversity and diseases of tomato in an intercropping system; introduction of medicinal plants of asadabad area; using of cumin essential oilsto control of food poisoning in dry whey; study of inhibitory effect of zataria multiflora boissessential oil, nisin and their combination on the production of staphylococcus aureus (Atcc 6538) enterotoxin C; antimicrobial properties of salvia officinalis essential oil in vapour phase; the effect of nanoemulsification; seed oil chemical composition determination of dog rose (rosa canina L.); extraction and determination of buglass (anchusa italica retz.) seed oil chemical composition; effect of different levels of salinity stress on germination indices and seedling growth of fenugreek (trigonella foenum L.); the effects of saline and drought stress on germination characteristics of globe artichoke (cynarascolymus); study of yield and yield components in different ecotypes of saffron (crocus sativus L.); evaluation of different sowing dates on yield and yield components in saffron (crocus sativus L.); antidepressant like effect of ethanolic extract of avena sativa L. in the forced swim test and tail suspension test in male mice; identification the volatile oil compounds in (hypricum perforatum L.) by spme-GC/MS method; introduction and identification of medicinal plants of zarghan region in fars province; effect of seed pretreatment with

nano-particle of titanium dioxide, ascorbic asid and salicylic asid on storability of nigella sativa L. seeds; antimicrobial effect of extract of allium sativum and lavandula officinalis on bacillus cereus and pseudomonas aeruginosa; in vitro callus induction and production of antitumor triterpenoids in callus culture of salvia sahendica; antibactrial activity of extracts of salvia ceratophylla L. from kashan; production of rosmarinic acid in callus culture of satureja khuzistanica and satureja rechingeri; comparison of allelopathic action of three groups of medicinal plants (essential oil plants, alkaloid plants and flavonoid plants) on three weed speciesciescies; allelopathic effects medical plant of salicornia herbacea L. extracts on germination and seedling growth of hyssopus officinalis and taraxicum officinalis; the evaluation of changes in polyphenolic acid at vegetative, flowering and post flowering stages in hibiscus sabdariffa linn; the influence of embryo stage on haploid induction in medicinal pumpkin; effect of phytohormones with different concentrations on chemical components of essential oil of sambucus candensis L.; comparison of hormonal changes (Iaa, Ga<inf>3</inf>) of the composition of essential oil from sambucusracemosa L. leaf; effects of planting time and spraying on yield and oil production of peppermint (mentha peperita L.) in mazandaran; influence of vacuum packaging and different storage conditions on quality and ascorbic acid of fresh seedless barberry fruit; germination response of pomegranate seeds to potassium nitrate, sulfuric acid and hot water pretreatments; the changes of hypophysys hormones in pcos rats that treated with aqueous fennel extract; effects of biofertilizers and chemical on quantitative and qualitative yield of dragonhead (dracocephalum moldavica L.); study on effect of some environmental factors on morphological traits and essential oil productivity of thymus caramanicus jalas; anti-bacterial properties of ethanol extracts of algae (entreromorpha intestinalis, cystoseira myrica, gracilaria corticata) against the bacteria, bacillus cereus (PTCC1015) and staphylococcus aureus (PTCC1112); essential oil variability among some populations of thymus caramanicus jalas from Iran; antibacterial effects of water and alcoholic extract of rhizopogon roseolus macroscopic fungi by the disc diffusion method; the studing of antibacterial properties of water and alcoholic extract of macroscopic fungus tuber latisporum; the influence of fennel harvest time on omega-3 and omega-6 contents in shoots, leaves, stems and inflorescences under ahwaz climatic condition; variability in concentration of phenolic acid derivatives among wild zataria multiflora accessions from Iran; effects of solvent type on phenolics, flavonoids and saponins content and antioxidant activities in dianthus orientalis rech.F.; the study & comparision of leaves & fruites antioxidant activity of laurus nobilis.L (bay leaf); the ability of callus culture of salvia sahendica in production of rosmarinic acid; antibacterial effects of extracts of allium sativum and allium ascalonicum on staphylococus aureus and salmonella enteritidis; comparison of quantitative and qualitative composition of the essential oil of thymus daenensis and thymus fedtschenkoi in the kurdistan habitates; essential oil composition of echinophora orientalis from Iran; exploring the effect of aromatherapy using lavender oil on the patients with ischemic heart disease in the intensive care units (ICUS) of the hospitals of the city of Isfahan in 2009; an investigation into the effect of chamomile on decreasing the pre-menstrual symptoms in the female high school students in the city of Burojen, Iran, in 2012; investigation of habitat and distribution of different species of thymus genus in Iran (kurdistan province); kinetics and inactivation study of bitter melon (citrullus colocynthis) peroxidase in different conditions; evaluation of antioxidant and free radical scavenging activity of the citrullus colocynthis fruit grown in Kerman province; effect of postharvest treatments of plant essential oil on qualitative attributes in apricot (prunus armeniaca CV. askarabad); yield, chemical elementsand morphophysiological traits of calendula officinalis L. in response to foliar application of bio-stimulators in karaj climate; six weeks of aerobic exercise and peppermint on inflammatory markers and lung function and aerobic power; ameloration of non-alcoholic fatty liver disease (NAFLD)/non-alcoholic steatohepatitis (NASH) by chicory seed extract via modulation of PPARalpha and SREBP-1; the effects of soil and foliar application of mog bio--fertilizer on morphophysiological traits of moldavian balm (dracocephalum moldavica); effect of mobile phone radiations on morphological and biochemical parameters of sunflower seedlings; evaluation of phytochemical and antibacterial effects of basil essential oils in hamburger; investigation of morphophysiological traits of savory (satureja hortensis L.) to foliar application of methanol and bio-stimulators; interaction of iron and cadmium on growth and some anatomicy parameters carum copticom; comparison of nano iron and iron chelate effect

on ion content in melissa officinalis under aluminum stress; physiological and biochemical responses of marigold medicinal plant (calendula officinalis L.) to drought stress; study on the effect of peppermint essential oils on some bacteria; comparison of antimicrobioal effect of essential oil of vitex agnus - castus with common antibiotics invitro; identification of optimum growth in green microalgae tetraselmis suecica and fatty acid composition in diffrent light and salinity; evaluation of seed germination characteristics balango (lallemantia royleana) in response to different levels of temperature; the examination of the effects of three levels of mycolrhiza and four levels of cultivation bed on the rate of seed germination, wet and dry weight of shoot tips containing the effective matters of catnaranthus alba; chemical composition and antimicrobial activity of leaves of cirsium strigosum (M.B.) M.B. strigosum; chemical compositions of essential oil of flower of artemisia kopetdaghensis from Iran; chemical composition of the essential oils of ocimum basilicum L. cultivated in Iran; evaluation of antimicrobial activities of methanolic extract of seed of citrullus colocynthis (L.) schard. from Iran; essential oil yield and composition of pelargonium graveolens L. under thidiazuron application; antimicrobial activity and chemical composition of flower of cirsium turkestanicum (regel) from Iran; effect of red light and seed coat removing on seed germination of kelussia odoratissima mozaff; composition of essential oil from aegle marmelos peel extracted by microwave-assisted hydrodistillation with pre treatment ultrasound; effect of different extraction methods (hydrodistillationo and microwave-assisted hydrodistillation) on the extraction efficiency and essential oil composition from aegle marmelos peel; storage changes in essential oil composition of thymus daenensis celak; storage changes in essential oil composition of myrtus communis L.; composition of the volatile component of valeriana ficariifolia boiss. roots using headspace/GC-MS; chemical constituent and polyphenol compounds of gaillonia eriantha jaub. & spach; exogenous salicylic acid improves growth and antioxidant defense system in phlomis tuberosa; effect of mycorrhiza fungi as an organic biofertilizer on growth and some physiological characteristics of calendula (calendula officinalis L.) as a medicinal plant; effect of different drying methods on drying time, essential oil content and color characteristics of mentha piperita; drought stress affects essential oil yield in leaf, stem, inflorescence and flowering shoot of nepeta racemosa; solvent-free microwave extraction of essential oil from citrus limon (eureka variety); effect of drought stress on leaf, stem and inflorescence yield of nepeta racemosa; effect of different drying methods on some biochemical properties ofmentha piperita; study the effects of treatment time with silicon in improving some physiological and biochemical characteristics of Iranian borage (echium amoenum fisch & C.A. Mey); effect of pinching on growth, yield and essential oil content of pelargonium graveolens L.; the study of distribution and ecology of medicinal species from compositae (asteraceae) family in boushehr province; genetic diversity assessment of Iranian wild almond populations by using inter simple sequence repeats; improvement on the situation of regeneration of medicinal plant satureja hortensis L.; an investigation on the effect of curcumin on the peroxidase enzyme; effect of chemical treatments on the germination of fennel (foenicuhm vulgare mill); protective effect of some medicinal plants against Aaph-induced hemolysis of human erythrocytes; antioxidant properties and free radical scavenging activity of euphorbia amygdaloides leaves; effect of biological fertilizers on the quantitative and qualitative characteristics of thymus daenensis medicinal plant; steviol glycosides from stevia rebaudiana bertoni cultivated in three different climatic regions; evalution antimicrobial activity of methanol extract of plant aloe vera (xerophytic) marrubium vulgare and (trachyspermum ammi L) against strains of staphylococcus aureus in the antibiotic-resistant; effect of diffrent levels of artichoke powder (cynara scolymus L) and vitamin E on performance of japanese quail; antioxidant activities of fractions from different parts of mangrove plant rhizophora mucronata (Lam.); effect of biofertilizers on morphological features of nepeta racemosa; study the effect of biofertilizers on some of characteristics of milk thistle (silybum marianum L.); efficiency of biofertilizers and chemical fertilizer on yield and yield components of dragonhead (dracocephalum moldavica L.); comparison of volatile components of leaves and flowers of citrus aurantium L. using headspace/GC-MS; evaluation of essential oil components of lagoecia cuminoides L.; effect of magnesium sulphate osmopriming on germination and seedling growth of silybum marianum; effect of different concentrations nitroxin and plant density on morphological traits and oil harvest index in medicinal plant of anise (pimpinella anisum L.); effects of rosemary

(rosmarinus officinalis) extract on some blood parameters and immune system of markhoz strain newborn kids; effects of rosemary (rosmarinus officinalis) extract on growth performance and cell-mediate immune response of markhoz strain newborn kids; antioxidant properties of different extracts of green tea and rosemary; neuroprotective effects of salvia choloroleuca leaves alcoholic extract on neuronal density of alpha-motoneurons after sciatic nerve compression in rats; the effects of salvia choloroleuca leave ethyl asetat fraction on motoneurons degeneration after sciatic nerve compression in rats; effect of nano-organic iron chelated fertilizer and iron sulphate on dry matter yield, essential oil percent and essential oil yield of daenian thymus; assessing growth changes and hyper accumulation potential in coriander (coriandrum sativum L.) under three heavy metals; cadmium, lead and nickel; effect of different levels of N fertilizer and row spacing on growth, development, oil content and herbage yield of moldavian dragonhead (dracocephalum moldavica L.); the study of medicago (fabeceae) species based on nuclear ribosomal dna its sequences in Iran; fumigant toxicity of some terpenoids of elettaria cardamomum (zingiberaceae) seed essential oils against the indianmeal moth; toxicity of plant extract rubia tinctorum in comparision with thiamethoxam on green lacewing chrysoperla carnea (stephens); toxicity of plant extracts aniethum graveolens and ferula gummosa on green lacewing chrysoperla carnea (stephens); cytotoxicity effect of orchismasculata extract on cancer cell line; physicochemical properties of natural honey from ilam and its effect on oxidative stress in streptozotocin-induced diabetic rats; moisture transport in hawthorn (crataegus oxyacantha) undergoing microwave- convective drying; effect of berberis vulgaris grain on some blood parameters of broiler; study on the effect of the "ethanol" and essential oil of medicinal plants "satureja hortensis" on post--harvesting quality of davoodi cut flowers white engineering number; essential oil yield and compositionchanges in kelussia odoratissima mozaff using different drying treatments; the effect of carvacrol and thymol on increase of lifetime of davoodi cut flowers white engineering number; introduction of medicine plants in asadly of bojnourd; the predication of garlic (allium sativum L.) drying rate (DR) and moisture ratio (MR) using a neural network metthod; identification of conserved domains for codeine O--demethylase (CODM) in papaver somniferum L.; the effect of different irrigation intervals on growth parameters and essential oil of salvia macrosiphon boiss; investigation changes in chlorophyll, carotenoid and proline contents in response to different irrigation intervals in salvia macrosiphon boiss; a study of punica granatum L. pollen grains total flavonoid extract on immune system responses; the effects of salicyl hydroxamic acid on germination indices and biochemistry hypericum perforatuml. seed; the effect of soaking duration on seed dormancy breaking and seedling growth of kelussia odoratissima mozaff; pot planting and mycorrhiza inoculation useful methods for establishing ziziphora clinopodoides in rangelands; effects of mycorrhiza symbiosis on initial establishment and morphological traits of thymus vulgaris under field conditions; investigation of essential oil properties of different varieties of lemon (citruslimon) peel extracted by hydrodistillation; a study on antimicrobial properties of rosa foetida against various pathogens; screening the medicinal potential of some weeds by HPTLC method; investigation on changes of protein pattern in embyonic and non-embryonic callus, matured embryo and plantlet of rumex tuberosus L. subsp. horizentalis; UV irradiation effects on seed germination and growth, protein content, peroxidase and protease activity in portulaca grandiflora and portulaca oleracea; comparative effects of menthol and ultraviolet radiation on percentage of thyme and althea seed germination; increaese of phenolic compounds of yarrow treated by silver nanoparticles; floral development, stigma receptivity and pollen viability in satureja rechingery jamzad; evolotion of relationship between satureja khuzistanica and S. rechingeri jamzad using with morphological markers; antibacterial activity and chemical composition of ajowan (trachyspermum ammi) essential oil against some pathogens with macro dilution method; antimicrobial activity of leaves oils (marrobium vulgare) against staphylococcus aureus resistant antibiotic; antimicrobial activity of ethanol extract of eucalyptus (eucalyptus globules) and (satureja hortensis) against of staphylococcus aureus diefficalt antibiotic-resistant; the effect of garlic (allium sativum) extract on immune response and growth of markhoz newborn kids; evalution antimicrobial activity hydroalekol thyme extract (zataria multiflora boiss) against antibiotic--resistant strains of E. coli; comparative polyphenolic and total phenolic contents of teucrium polium in different growth stages; the effect of vermicompost on morphology and yield of balm

(melissa officinalis); improving balm (melissa officinalis) growth and yield by biofertilizers application; determination of nutritive value of rheum-L using in vitro gas production technique; callus induction from different explants ocimum basilicum with the plant growth regulators; antioxidant and free radical scavenging activity of ilex spinigera; composition and antibacterial potential of essential oil from thymus migricus klokov & desj.-shost; characterization of volatile components of leaves and flowers of sweet orange (citrus sinensis L.) using headspace/GC-MS; variationn in eseential oil content and composition of assafoetida (ferula assafoetida) in Kerman province; comparison of some vegetative characteristics and investigating the changes of essential oils of T. kotschyanus in west Azarbaijan; diuretic effect of extract of lippia citriodora, echium amoenom and urtica pilulifera in male rat; essential oils composition and antioxidant properties of two thymus species; in vitro callus induction from different explants of sage (salvia officinalis L.); comparison of cytotoxic effect of aqueous and methanolic extracts of pterocarya fraxinifolia leaves on HT-29 and K562 cell lines; investigation of allelopathic activity of medicinal plant vinca rosea L. on seedling growth of three test plant species; effects of aromatic water of salix aegyptiaca L. and its major compound, 1, 4-dimethoxybenzene, on rabbit bihavior pattern; the potential of essential oils of satureia hortensis and zataria multiflora to control ruminal acidosis; evaluation of anticonvulsant, antidepressant and sedative-hypnotic activities of asperugo procumbens leaves; the effect of chemical fertilizers on lavender essential oil percentage; effect of cadmium toxicity on growth, biochemical parametrs and metal accumolation in parsley (petroselinum crispum L.); study of the haemostatic effect of some plant extracts; duretic effect of allium porrum L. ethanolic extract in male wistar rats; anti-inflammatory effects of artemisia dracunculus L. ethanolic extract in mice; essential oil composition, flavonoid and anthocyanin content of artemissia annua l. treated with methyl jasmonate and silver nano particles; the effect of spraying the methanol solution on morphological charactaristics of plantago psyllium; microalgae dunaliella salina as a functional food and nutraceutical source; assesment of different plant density and arrangments on quantitative and qualitative performance of calendula officinalis L.; essential oil composition of rosa foetida from Iran; ethno-pharmacology of ferula gummosa boiss. and ferula assa-foetida amoung kurmanj people of northern khorasan province; determination of total antioxidant effect of six Iranian pomegranate flowers by HPLC-DPPH; study of dry mater yield, and essential oil percent in three species of satureja (S.Rechingeri, S.Khuzestanica and S. Mutica) grown in khorramabad climate condition; screening the potential allelopathic chemicals from the medicinal plant of artemisia sieberi; modified dna extraction method in myrtus communis for optimal Pcr amplification; sustainable beneficiary of savory genetic resources in Lorestan province; artemisia species from Iran are different in antioxidant activity and total phenol content; variation of trans- anethol content in fennel (foeniculum vulgare) during different developmental stage; effect of salty solutions osmopriming on germination and seedling growth of cynara scolymus; variation of the essential oil yield and composition of pelargonium graveolens L. under nanosilver particles treatment; composition of essential oil of leucanthemum vulgare; evaluation of the phenol and flavonoid contents in some local and foreign apple cultivars; the effect of irrigation and time of micronutrient foliar application on yield and yield components of black cumin (nigella sativa L.) in birjand area; phytochemistry study on the two species of achillea in different region; comparison of the effect of alcohol spray and bio--stimulators on the mucilage yield of psyllium; effect of sprey application of zinc and manganese on yield and yield components of safflower; the effect of daphne mucronata leaves extract on viability of primary rat glial cells; foliar application of amino acid active compounds on the reproductive of plantago psyllium; variation of colchicine content in different seasons among three colchicum species; determining the best extraction solvent of glabridin from licorice root and measuring it in species native to Kermanshah; investigation the effect of integrated mineral nutrient managements on seed yield and essential oil efficiency of fennel (foeniculumvulgare); phytochemical and antioxidant activity of atropa belladonna.lin mountainous area golestan province; effect of different rates of chemical fertilizer (NKP), manure and mix of them on growth, yield, and essential oil of satureja khuzistanica jamzad; comparision of mucilage amount and morphological traits in native ecotypes of plantago in plant in golestan province; study of phenological stages in four native ecotypes of plantago in climate condition golestan province (azadshahr); effect of different levels of manure on anise essential oil percentage and yield; chromosom

counting of six population of leonurus cardiaca from Iran; comparison of essential oil contents of six populations of motherwort (leonuruscardiaca) in Iran; evaluating the allelopathic potential of medicine plant of polygonum convolvulus; phytochemical and antioxidant activity of atropa belladonna.lin forestareaofgolestan province; antifungal effect of dry and caspian regions fig leaf extract on candida albicans yeast; study effects of methanol extracts of four Iranian thymus cultivars on proliferation of human lymphocytes; effect of ascorbic acid foliar application on growth and antioxidants enzymes activity of basil (ocimum basilicum) under different soil moisture levels; the effect of drought stress on morphologic characteristics, proline and soluble sugars of anisum (pimpinella anisum L.); study of stem anatomy in genere of malva and altheae (malvathea); a novel approach to application of weeds as medicinal plant; influence of ethanolic extract of melia azedarach L. on percentage of encarsia formosa emergence from the parasitized puparium of trialeurodes vaporariorum; toxicity of essential oils from lavabdula angustifolia and cinnamomum zeylanicum against agonescena pistaciae in laboratory conditions; toxicity of essential oils from eucalyptus globulus and rosemarinus officinalis on agonescena pistaciae in laboratory conditions; evaluation of yield and its components in intercropping of fennel (foeniculum vulgare mill.) and fenugreek (trigonella foenum-graecum L.); effect of halopriming technique on improvement of some physiological traits of medicinal plant caper (capparis spinosa parviflora L) seeds; plasma matrix metalloproteinase 2, 9 levels are reduced following purslane seed supplementation in patients with type 2 diabetes mellitus; effect of storage time of aqueous saffron extract on secondary metabolites; effect of cinnamomum zeylanicum, allium sativum and urtica dioica alcoholic extracts on activity and control of the fusarium oxysporum; comparison of the antiocxidant activity of the flowers methanolic extract of two plants of the family (boraginaceae); evaluate postharvest aloe vera gel-coating on storage life and quality attributes of peach (prunus persicacv. elberta); feraction distillation chemical composition, antibacterial and antifungal activity of the essential oil of thymus fallax fisch. mey; comparison of salinity effects of essential oil yield and components of achillea millefolium L. in greenhouse and natural conditions; the effect of Fe chelate application on rosa damascena mill; the effect of growth regulators on morphophysiologyand agronomic characteristics of psyllium (plantago psyllium); effect of culture filtrate of fusarium graminearum on total phenol and flavonol content in cell culture of linum album; effect of organic matter, iron and zinc on cumin cyminum production in calcareous soils; effect of NaCl salinity and ascorbic acid on biomass yield and essential oil content of pelargonium graveolens L.; evaluation of radiation use efficiency and extinction coefficient in summer pumpkin (cucurbita pepo L.); evaluation the allelopathic effect of shoot aquatic extract of bermudagrass (cynodondactylon) on germination and seedling growth of fennel (foeniculumvulgare); effect of ascorbic acid on vegetative characteristics of pelargonium graveolens L. under NaCl salintity; protective effects of portulaca oleracea L. against carbon tetrachloride-induced hepatotoxicity in rats; the study of antibacterial effects of lawsonia inermis, zataria multiflora boiss and urtica dioica alcoholic extracts on pseudomonas syringae; purslane extract ameliorates carbon tetrachloride--induced acute hepatic injury in rats; application of plant growth regulators on morphophysiological and agronomical properties of fenugreek (trigonella foenum-graecum L.); effect of plant growth regulators and media on micropropagation of artemisia aucheri boiss; investigation of row arrangement and planting date on quality and quantity of cucurbita pepo L.; virus induced gene silencing in cannabis sativa; chemical compositin comparing, of essantial oils of heracleum persicum L. seeds in conditions of dehbala and manshad areas of yazd province; introducing the best method for DNA extraction and comparing it with common methods in medicinal plant of noruzak (salvia leriifolia); effect of grape seed'S extract on some secondary metabolites and fungal decay of table grape (CV. fakhri.) over postharvest life; determining the best hormonal treatment and media for propagation of artemisia sieberi invitro; the effect of medicago sativa supplementation on serum lipid profile in low weight girls; morphophysiological changes of fenugreek (trigonella foenum-graecum L.) leaves to foliar application of methanol and nano-iron chelated in field; effect of thymus essential oil, salicylic acid (SA) and methyl jasmonate (MJ) on storage life and quality of redtablegrapes (CV. sahebi.); effect of terminalia chebula on growth performanc, serum biochemical parameters and organs weight in broiler chickens; effects of dietary adminstration of aloe vera on serum antioxidant enzymes in rainbow trout fingerlings; a survey on mycorrhizal symbiosis with

the thymus daenensis and its effects on the root growth; effects of dietary adminstration of aloe vera on serum mda in rainbow trout fingerlings; effect of drought stress on morphology of dill; the amount of essential fatty acids in extra virgin oil in four olive cultivars; study of microspore development stages in thymus daenensis; the study of antioxidant activity of ethanolic and methanolc extracts of quercus infectoria galls; antimicrobial activity of zataria multiflora boiss. essential oil against vancomycin-resistant enterococci (VRE) in minced broiler meat; antimicrobial activity of saffron against salmonella enteritidis in food; character association and path analysis of black seed (nigella sativa L.) genotypes under different irrigation regimes; the study of growth regulator composition and type of explant on callus formation in sebestan medicine plant (cordia myxa L.); arsenic determination in garlic by gfaas after subcritical water extraction; comparison of cytotoxic effects of methanolic extract and essential oil of achillea wilhelmsii C. koch on HT29 cell line; study the effects of organic manure and water deficiency on qualitative and quantitative yield of peppermint (mentha piperital.); investigation of anthocyanins amount in three species of medicinal forestal fruit in golestan province; evaluation of phytochemical activity of achillea micranta and achillea millefolium L. extract in east north of golestan province; evaluation of antioxidant activity of methanol extract of two achillea species in east north of golestan province; changes in essential oil percent and yield of pot marigold (calendula officinalis) in different doses and times of nano-iron foliar application; effects of organic fertilizers on grain and fruit yield of pumpkin (cucurbita pepo convar. pepo var. styriaca); the effect of planting density and planting time on satureja sahendica; anti-oxidant and anti-bacterial properties of ethanol extracts of algae (entreromorpha intestinalis, cystoesira myrica, gracilaria corticata) from the coastal waters of bushehr province (northern persian) with phenol & Rp tests; evaluating the effect of drought stress on morphology of chamomile from khuzestan, Iran; response of two chamomile populations to drought stress and harvest time; chemical compositions of the essential oils of scaligeria meifolia; comparison of hydro distillation (HD), steam distillation (SD) and microwave free solvent extraction (SFME) on flowers essential oil of hypericum perforatum; antioxidant properties of chloroform, methanol and water extract of hyrcanian ganoderma lucidum karst; optimization of HPLC-FLD method for determination of psp toxins in persian gulf and oman sea shellfish; effect of plant density on yield and yield components of various land races of fenugreek (trigonella foenum gracum L.) in Kerman climatologic conditions; comparison of chemical constituents of essential oil and polyphenol and antioxidant activity of methanolic extracts the pycnocycla nodiflora; comparison of chemical constituents of polyphenol and antioxidant activity of areal parts of pycnocycla nodiflora at different growth stage; production of lignans in callus culture of linum mucronatum subsp. orientale (boiss); effects of cattle manure, vermicompost and humic acid on grain yield and its components of fennel (foeniculum vulgare mill.); antioxidant activity of melissa officinalis leaves extracts during the different stages of plant growth; antibacterial activity of hidroalcoholic extract and butanol fraction of solanum nigrum L. leaves; microwave-assisted and conventional hydrodistillation methods in the extraction of essential oil from achillea santolina; ethnopharmacology and antioxidant activity of thymus kotschyanus boiss.et hohen.in north of Iran; national production and procreation of medicinal and organic plant "kelussia odoratissima" and its economic consequences; comparison of total phenolic content and anti--oxidant activity of achillea nobilis, A. filipendulina and A. millefolium; effect of foliar salicylic acid and cycocel applications on some physiological parameters of sweet basil; foliar application of salicylic acid and cycocel improved physiological parameters in dragonhead; introduction of achillea kellalensis as a new source of natural antioxidant; the effects of hydroalcoholic extract of garlic on serum levels of No in male rats; a comparison of alpha-tocopherol content of laurus nobilis leaves in different harvesting season (spring & fall) by reverse-phase high performance liquid chromatography (RP-HPLC); yield and yield components of fennel (foeniculum vulgar mill.) in response to foliar application of micronutrients (iron and zinc); effect of magnetic field and nano-particles of titanium oxide (Tio<inf>2</inf>) on seed germination and early growth characteristics of ajowan (ammi copticum L.) in premature senescence; analgesic effect of hypericum perforatum extract in rat by using hot plate test; using some essential oils in the control of bacterial canker disease of stone fruit; the effect of drought stress on total phenolic, prolin content and antioxidant activity of achillea millefolium L.; formulation of the horse chestnut emulgel for chronic venous

insufficiency; evaluation of antioxidant activity of ethanolic and methanolic extracts of purslane seeds; the effect of drying methods on yield and chemical composition of the essential oil of rosa foetida; alterations in seed vigor and antioxidant enzymes activities in satureja hortensis L. under seed priming; effect of achillea millefolium L. aerial parts on serum glucose in alloxan-induced diabetic rats; effect of growth media on the vegetative characteristics, phisiological parameters and oil production of valerian; introducing some diseases agents of thyme plants in hamadan province of Iran; dormancy breaking of imperial crown seeds; estimation of milk thistle seed silybin by using of multiple regression models; estimation of active substances contents of milk thistle by using stepwise regression; karyotype study of four capsicum anuum L. population, native to Iran; cell suspension culture establishment of taxus baccata for the production of the anticancer drug taxol; mycelium growth characteristics of a valuable medicinal mushroom ganoderma from golestan and mazandaran province; influence of salicyilic acid on yield and some morphologycal parameters of dragonhead under water stress; study of the effects of essential oils of cumin, savory and cardamom as natural antioxidants on the flavor and oxidative stability of soybean oil during the storage; diagnostic value of leaf anatomical features in silene commelinifolia (caryophyllaceae) complex; antioxidant activity, total phenolic and flavonoid compounds of mespilus germanical. (rosaceae) leaf methanolic extract in different altitudes; chemical composition of the essential oil of pistacia atlantica galls and leaves by combipal system technique; intraspecific variability of the essential oil of ocimum basilicum L. var. purpurascens and var. dianatnejadii from Iran; effect of gamma irradiation on the tannins and phenolics of artemisia aucheri boiss; morphological characterization of some cannabis accessions from different regions of Iran in relation to their medicinal or fiber production efficiency; effects of nano fertilizers and heavy metals on some physio-morphological traits of three medicinal species at seedling stage; path analysis of the relationships between seed yield and some morphological traits in cumin (cuminum cyminum L.) to drought stress; effect of sowing dates and depths on emergence characteristics and tuber production of medico-industrial ferula assa-foetida; separation of DNA for molecular markers analysis from leaves of the matricaria chamomilla; investigation of the effect of nutrient resources on weed diversity and quantitative and qualitative traits of cat tyme (teucrium polium); antihyperglycemic activity of hydro-alcoholic extract of urtica dioica on type 1 diabetic male mice; identification and quantification of antioxidants found in lemon juice; anti-ulcerogenic activity of the pomegranate peel (punica granatum L.) methanol extract; survey of phytochemical constituents and antimicrobial activities of aloe vera; the effects of some heavy metals on psoralen anti cancerous compound in vitro culture conditions; chemical-genetic profile analysis of eugenol in saccharomyces cerevisiae; effect of seed coat colour on salinity tolerance in mustard (brassica compestris var. parkland) as a medicinal plant; isolation, purification and structure elucidation of flavonoids from lagochilus cabulicus benth; the effect of drought stress on some factors of quantity and quality of artemisia dracunculus L.; chemical constitutes of the essential oil of artemisia aucheri boiss from alpine in Kerman; determination of carbohydrate and nutrient content in lycium ruthenicum murry plant; comparison of total phenolic content (TPC) and flavonoids in lamiaceae and plumbaginaceae family; chemical composition of the essential oils of two aromatic plants species (asteraceae); improve in vitro culture of lippia citriodora by using garlic extract; the effect of various hormones on in vitro embryo germination and callus induction in ferulago angulata subsp carduchorum, an endangered medicinal plant; design and development of self-nanoemulsifying drug delivery system (SNEDDS) of boswellia serrata extract for oral drug delivery; chemical composition and antimicrobial activity of ferula behboudiana essential oil from Iran; establishment of callus and cell suspension culture of scrophularia striata boiss. for echinacoside production; determination fatty acids in moringa peregrina oil from different location in sistan and balochestan proviance; effects of different culture media on rooting of passiflora incarnata stem cuttings; seasonal fluctuation of the essential oil and 1,8-cineole compound in adapted eucalyptus species in fars provience; cytogenetic variability and new chromosome number reports in some species of helichrysum mill. (compositae); effects of antiaging (aloe vera, satureja hortensis, teucrium scordium) and mixture of them on D-- galactose induced aging in male mice; evaluation of germination characteristics of fleatwort and purple coneflower affected by different salinity stress levels; the effect of plant regulators on callus induction of thyme (thymus vulgaris.l and thymus daenensis);

effects of different salinity levels of NaCl and CaCl<inf>2</inf> on germination of safflower (carthamus tinctorius L.); investigation of possible anti-aflatoxicosis properties of savory essential oil; phytochemical analysis and antibacterial effect of achillea tenuifolialam; changes in essential oils content and chemical composition of artemisia sieberi during different phenological stages; the effect of imidacloprid and plant extract on biological parametres of chrysoperla carnea (stephens) (neu. chrysopidae) in laboratory condition; investigation on imidacloprid and plant extracts effects on stable population growth parameters of chrysoperla carnea (stephens); determination of inhibitory effect of anthemis gayana flower essential oil against pathogenic fungi; the effect of dorema aucheri- hydroalcoholic extract on blood glucose, insulin and leptin in STZ- nicotinamide induced type 2 diabete in male rats model of diabetes; antioxidant, antimicrobial and antitumor activity evaluation of total methanolic extracts from dendrostellera lessertii (wikstr.) van tiegh. from kashan; in vitro radical scavenging activity of zataria multiflora accessions in relation to their rosmarinic acid content; total phenolic and total flavonoid contents, antioxidant activity of zataria multiflora accessions from Iran; the effects of different organic fertilizers on chlorophyll and some characteristics of basil medicinal plants (ocimum basilicum); biological control of three weeds by allelopathic properties of aloe vera; allelopathic effect of artemisia sp. on germination of purslane (portulacaoleracea L.); effect of three grocery herbs on growth of klebsiella pneumoniae in vitro; assesment of the nitrogen and compost different levels effects on qualitative and quantitative performance of calendula officinalis L.; cytotoxic effect of plant extracts of ammi visnaga in hela and MCF7 cell lines; determination of total flavonoid and tannic contents of six Iranian pomegranate flowers; influence of elevation on morphplogical and physiological features of local populations of mountain pride in zanjan; influence of elevation on morphological and physiological features of local populations of mountain pride in tarom; studying medical plant of ferula assa foetida and its characteristics, economical importance, export and global marketing in South Khorasan Province - Iran; performanc, biochemistry profile of serum and organs weight of broiler chickens as influenced by dietary echinacea purporea supplementation; effects of water stress on germination of persian poppy; investigation of vermicompost and humic acid effects on quantitative qualitative traits of satureia hortensis L.; effect of teucrium polium (L.) extract on biological parameter of bemisia tabaci (genn.) under semi-field condition; study of karyological characteristics in several accessions of castor (ricinus communis L.); seed priming improve the germination performance of common chicory (cichorium intybus L.) under drought stress; effect of fumaria parviflora (lam.) extract on biological parameter of bemisia tabaci (Genn.) under semi-field condition; the comparison of Iranian and Indian extract of cynara scolymus L.; evaluation of callus production potential in leaf explants of persian shallot (allium hirtifolium); an endemic and endangered plant species; cytogenetic study of four satureja (lamiaceae) species and populations in Iran; interactive effects of arbuscular mycorrizal, salisylic acid and drought stress on fruit yield, morphological characteristics, root colonization, physiological traits and secondary metabolites of ajowan. (trachyspermum ammi L.); effect of salicylic acid and cycocel (cholomequat chlorid) application on yeild and morphological traites of moldavian balm (dracocephalum moldavica L.); compare the weight efficiency of the essential oil stachys byzanthina plants in both regions growing of the mazandaran province; effect of urtica dioica hydro-alcoholic extract on serum testosterone level of STZ - diabetic mice; ethnopharmocological uses of A. Millefolium L. (yarrow) growing wild in east north of Iran (chaharbagh region); the study of quantitive and qualitative changes of heat shock proteins and proxidase enzyme activity, the effect of repeated heat stress on micropropagated zataria multiflora boiss in vitro condition; variability of photosynthetic pigments in rosemary (rosmarinus officinalis) under arbuscular mycorrhizal fungi symbiosis and heavy metals stress; evaluation of sowing dates and planting depth on emergence characteristics and producing tuber of medico- industrial plant of ferula gummosa; study the effect of harvest time and plant density on agronomic attributes of thyme (thymus vulgaris L.) in second year; study the effect of harvest time and plant density on tarragon (artemisia dracunculus L.) yield in third year; the effect of salicylic acid hormone (SA) on some anatomical and morphological characteristics of watercress (nasturtium officinale R. Br.); modeling color and shrinkage variations of terebinth in a semicontinuous dryer; hypolipidemic effect of hydro-alcoholic extract of urtica dioica in STZ - diabetic mice; effect of applying chemical fertilizers and municipal

solid waste compost on amount of flavonoid, anthocyanin and morphologycal parameters of herb coneflower (echinacea purpurea L.); ethnobotanicl study of paband national park (mazandaran province); investigation of carvacrol and gamma-terpinene contents of summer savory (satureja hortensis L.) essential oil in sari climatic condition; the influence of salicylic acid levels on morphologicaltraits and essence yieldof german chamomile (matricaria chamomila L. Cv bodegold) under normal and heat stress conditions; introduction of medicinal plants species with the most traditional usage in kalmand protected area; determination antioxidant capacity and rate of phenol under salinity in artemisia aucheri boiss; application of chemical fertilizers, manure and their incorporation on some of the morphological and biochemical attributes of coneflower (echinacea purpurea L.); fumigant toxicity of essential oils from achillea wilhelmssi and ziziphora clinopoides on ephestia kuehniella zeller; study the effect of drought stress and spraying salicylic acid on some growth parameters of sweet basil cultivars; response of basil (ocimum basilicum L.) to different rates of nitrogen fertilizer; effect of irrigation with treated muncipial wastewater on geowth and yield of different aleo vear cultivars; the effect of salinity on growth and yield of different aloe vera cultivars; study of the effect of bisdemethoxycurcumin on the amyloid fibrillogenesis of lysozyme; influence of arbuscular mycorrhizal fungi on occurrence time of generative growth and chlorophyl content of pot marigold (calendula officinalis) under heavy metals stress; influence organic manures and nitrogen fertilizer on growth, yield and essential oil composition of agastache (agastache foeniculum); the effects of nitroxine, bio sulfur fertilizers and super absorbent polymer on essential oil quantity and quality of vegetable parts of ocimum ciliatum hornem; the study on phenological properties, yield and anthocyanin content of roselle (hibiscus sabdariffa L.) cultivated in mashhad climate; anti apoptotic effect of aquatic extract of cannabis sativa (9 tetra hydro cannabinol) and prosopis farcta (quercrtin) on cell body of motoneurons after nerve crash; effect of alcoholic extract of nettle (urtica dioica) and shallot (allium ascalonicum) on control of the penicillium digitatum; effect of plant growth promoting rhizobacteria on morphological parameters in coriander (coriandrum sativum) under salt stress condition; sedative-hypnotic effects of myrtus communis L.; investgation the effect of hypericum perforatum on cecum and big intestinal morphometric in male wistar rats; the effect of different treatments for breaking dormancy and germination of some population of allium hirtifolium seeds in different regions; study of inhibitory effects of hydroalcoholic extract of stachys lavandulifolia vahl. aerial parts on xanthine oxidase and xanthine dehydrogenase activities in mice; effect of plant growth promoting rhizobacteria on chlorophyll and carotenoid contents in coriander (coriandrum sativum) under drought stress condition; histophatological study of the effect of oral administration of green tea extract on spermatogenesis in mice; response of the growth and production pumpkin to the application of phosphorus chemical fertilizer and phosphate solubilizing microorganisms; effect of bio and chemical fertilizers of phosphorus on some agronomic characteristics and yield of cucurbita pepo L.; evaluation the response of yield, yield components and essential oil of fennel (foeniculum vulgare) to the using of mycorrhiza and different doses of phosphorus fertilizer; optimizing p availability for medicinal pumpkin and its effects on yield using arbuscular mycorrhizal fungi; evaluation of the reduction of nitrogen fertilizer application using nitroxin biofertilizer at the production of anise (pimpinella anisum.L) medicinal plant; salicylic acid improves germination charactristics in fenugreek under salinity stress; the performance of some fennel (foeniculum vulgar mill.) accessions under drought-stress conditions; change in the antioxidant activity of fenugreek plants induced by salicylic acid and salinity; medicinal plant (nepeta binaludensis jamzad) tissue culture and A-terpinene variations of essential oil in vivo and in vitro; leaves essential oil composition of lemon verbena grown in aggregate media and aeroponic system; phytochemical investigation on salvia sahendica and study of the cytotoxic activities of its active components; an analysis of genetic diversity of tripleurospermum sevanense, anthemis tinctoria, matricaria recutita speciesusing peroxidases markers; effecta of biological manure on seed germination characteristics and enzyme activity in dracocephalum moldavica; investigating the effects of lavandula angustifolia essential oils on fermentation and gas production parameters of alfalfa; effect of two extraction methods of rubia tinctorum on mortality of cotton whitefly, bemisia tabaci (Genn.); an analysis of genetic diversity of anthemis, matricaria, tripleurospermum speciesusing populations using total proteins and its association with geographical factors;

investigating the effects of lavandula angustifolia essential oils on fermentation and gas production parameters of straw; the new perspective of mitigating effect of silicon on borago officinalis L. under salinity condition; ecological, phytochemical and antioxidant activities of nasturtium officinale R. Br. in ziarat mountain (golestan province); effect of salicylic acid and gibberlic acid on flowering time, leaves and rhizome number in turmeric (curcuma longa); an investigation on some mineral elements amount in urtica dioica plant in golestan provience; investigating the effects of different doses of wild sage seed (salvia macrosiphon) on fermentationand gas production parameters diet with high concentrate; investigation the effects of using different levels of saturea (satureia hortensis) medicinal plant and salinomysin on performance and carcasses quality in broiler chickens stricken with coccidiosis; assessment of traditional medicinal plants commercialized in the markets of mashhad, Iran; effect of some medicinal plant extracts on stable population parameters of chrysoperla carnea (stephens); effect of foliar application of humic acid and pollen type on quantitative and qualitative criteia of medicinal pumpkin (cucurbita pepo var. styriaca); antibacterial effects of some marine and terrestrial plant extracts on listeria monocitogenes and bacillus cereus; effects of salinity stress on yield and essential oil of mentha (mentha piperata); evaluation of lipoprotein levels and hepatotoxicity of teucrium polium in male rats; effect of seed'S coat of madder (rubia tinctorum) on indices germination; effect of silicon treatment on some morphological and physiological traits of salt-stressed calendula (calendula officinalis L.); nanoemulsification of satureja khuzistanica essential oil; investigation of the antibacterial activity of satureja khuzistanica essential oil in the vapor phase; combination effect of methanolic extract of fumaria parviflora, pymetrozine and Cal-J-N3 tomato variety on prematurity stage mortality of bemisiatabaci (Genn.); effects of different fertilizer treatments on the properties of essential oil of lippie citrodora repellency on trubolium castaneum; investigation of pyridoxine priming effects on seed carthamus tinctorius germination and seedling growth and peroxidase & catalase activity under drought stress; effect of gibberllic acid and ethanol alcohol on calendula officinalis L.; effect of water stres on the tymol content in thymus daenensis celak; investigation of salicylie hidroxamic acid (SHAM) priming effects on seed carthamus tinctorius germination and seedling growth and peroxidase & catalase activity under drought stress; histopathologic effect of ruta graveolens extract on changes of gastric tissue in mice; effects of weed interference and plant density on morphological characteristics and yields of fenugreek (trigonella foenum-grarcum); evaluation of genotypexenvironment interaction analysis and adaptability of different ecotypes of cumin at Kerman; effects of methanol and bio-stimulators as growth promoters for biomass and growth characters of savory (satureja hortensis L.); microwave irradiations effect on amount of phenolic compounds of marrubium anisodon; new report of fusarium Sp. causing leaf spot aloe vera in north of Iran; efficacy of repellency pure essential oils and formulation of nanoencapsulated essential oil of carum copticum on diamondback moth larvae; effect of different irrigation levels on yield, yield components and essential oil content of basil herb (ocimum basilicum L.); evaluation of the effects of irrigation frequency and glycin betaine on qualitative and quantitative traits in dracocephalum moldavica (L.); effects of neem extracts on carbohydrate reserves in adults of sun pest (eurygaster integriceps put); response of nepeta poganosperma to drought stress; antibacterial effect of pistacia khinjuk extract against some gram positive and negative bacteria; evaluation of the effect of cropping time and climate on amount of essence in mentha piperita; chemical composition, antibacterial and antioxidant activity of the essential oils from aerial parts of thecocarpus meifolius growing in Iran; identification and diversity of medicinal plants in tonekabon forests, mazandaran; identification, collection, conservation and determination geographical distribution of withania coagulans genetic resources in Iran; evaluation of culture substrate on seed germination of marsh mallow, althaea officinalis; effects of different of nitrogen fertilizers and manure on phyziological traits on balangu shirazi (lallamenta royleana); effect of plant essential oils on mycelial growth of fusarium graminearum in laboratory condition; investigation of the effect of substituting alfalfa with thyme (thymus vulgaris) extraction by-product in ruminant nutrition using gas production technique; effect of chemical and bio fertilizers on balm (melissa officinalis) morphology and shoot yield; effect of different levels of crushed black seed (nigella sativa) on some blood parameters in laying hens; effect of chemical and biological sources of sulfur on balm (melissa officinalis); effect of different seed harvesting times on

seed germination and seedling emergence indices of rumex (rumex tuberosus L.); effect of different levels of crushed anise (pimpinella anisum L.) on egg quality parameters in laying hens; the best planting density of nepeta poganosperma; effect of cold stratification,chemical scarification and Ga3 on dormancy breake in schrophularia striata; the effect of corm number on saffron yield components; the study micropropagation of satureia khuzistanica; the effect of planting density on saffron morphology and yield; effect of planting time and plant density on morphological characters and yield of achillea millefolium; effects of different jasmonic acid levels on growth and chemical composition of marigold single flower; impact of foliar application of putrescine on growth and photosynthetic pigments of marigold single flower; structure elucidation of marine alga sargassum angustifolium collected from the persian gulf coastal waters of bushehr; the effect of different n fertilizers and weed management on basil ry yield, oil percant, oil yield and linalol percent of basil in berseem clover and basil intercropping system; hepatoprotective effect of methanolic extract berberis integerrima root on carbon tetrachloride--induced acute hepatotoxicity in rats; evaluation of antioxidant activity and phenolic compound of gavan-E-gaz-angubini (astragalus adscendens); the effect of methyl jasmonate on some ionic and pigment content in thymus daenesis grown under salinity; effect of drought stress on peroxidase and chlorophyll contents in hibiscus sabdariffa linn; the effect of different vermicompost concentration on biochemical characteristicts of tho savory (satureja hortensis L.) cultivars; effects of salinity and water stress on germination characteristics of hyssop (hyssopus officinalis L.); investigation the effects of plant growth promoting rhizobacteria (PGPR) on the amount of essential oil of medicinal plant of tarragon; morphological traits reaction and Npk uptake of two savory of (satureja hortensis L.) cultivars to different vermicompost concentration; antidepressant-like potential of ethanolic extract of apium graveolens L. in the forced swim test and tail suspension test in mice; investigation the effects of biofertilizers on the morfological traits of medicinal plant of tarragon; PTLC isolation of marine alga sargassum angustifolium collected from the persian gulf coastal waters of bushehr; effect of different phenological stages on the essential oil content and chemical compositions of tancy (tanacetum vulgare L.); effects of cadmium and lead on seed germination and early seedling growth of fenugreek (trigonella foenum graecum L.); the effect of PH on seed germination of ruta graveolens L.; high scolicidal effect of ajowan (trachyspermum ammi) essential oil on protoscolices of hydatid cyst; the protective effect of henna and methylgreem on the bacillus thuringiensis against UV for control pieris brassicae; the effect of vermiwash foliar aplication and EM1 baikal fertilizer on morphological characteristicts and essentia oil content of satureja hortensis L.; optimum growth condition for fatty acids-rich microalgae isochrysis Sp; the effects of different drying methods on essential oil content and composition of on quantity and quality of essential oils of three genotypes of lippia citriodora in mazandaran; influences of drought stress on seed germination parameters in (ruta graveolens L.); the effect of altitude and harvesting time on chlorophyll content and essential oil of salvia macrosiphon boiss; essential oil composition of flower of citrus aurantiumand its effect on microbialproperties ofgoat milk; comparison of artemisia annua essential oil quality on three habitats in east of mazandaran; computational analysis of 2-phenylethanol (2Pe) biosynthesis pathway in damask rose; study of pre-treatments on seed germination of securigera securidaca L., salvia sclarea L., soponaria officinalis L. and malva sylvestis L.; the protective effect of methanolic extract of berberis integerrima root on kidney damage in carbon tetrachloride - induced nephrotoxicity in rats; influence of different growth media on emergence percentage and growth parameters of seedling in rumex tuberosus L.; estimation of total phenolic content in dracocephalum kotschy bioss., melissa officinalis L., achillea millefolium L., valeriana officinalis L., juglans nigra L., artemisia absinthium L., and rosmarinus officinalis L.; use of plantago psyllium seeds as holding valuable medicinal plant and an alternative to agar in tissue culture fritillaria imperialis; essential oil composition of flower of citrus aurantium and its effect on microbial properties of goat milk; the effect of different levels of dietary clove essential oil on water holding capacity (Whc) and meat moisture in broiler chickens; the block structure of sodium alginate from sargassum; milk-clotting activity of fruit extracts from cucumis melo; investigation the effects of clove essential oil on growth performance in broiler chicken; the anti-candida effects of ethanolic extracts of berberis vulgaris root and zataria multiflora boiss in vitro and their comparison with clotrimazole and amphotericin B.; evaluation of antioxidant

activity and total phenolic content of three thyme species at different heights; histopahologic study on the effect of tribulus terrestris extract on mice testicles after heating; germination and seedling growth of flax under different salinity levels of sodiu chloride; antimicrobial and antioxidant activities of flavonoid--rich fraction of froriepia subpinata; the effects of biological fertilizer and intercropping on some quantity and quality characteristics of fennel (foeniculum vulgare L.); benefit of alfalfa and fennel intercropping in different levels of planting pattern and biofertilizer; formulation of solid lipid nanoparticles containing herbal extracts of dracocephalum moldavica L. and viola tricolor L. as a sunscreen; chemical composition of pelargonium quercetorum essential oil; evaluating the effect of heavey metals on germination parameters of medicine plantof cannabis sativa L.; antioxidant activity of some extracts from aerial parts of ajuga chamaecistus SSP. tomentella; anatomical study of leaf and stem of carthamus tinctorius L. in Iran; histopathologic effect of ruta graveolens extract on changes of kidney tissue in mice; the effect of some treatments on seed dormancy and germination of ferulago angulata; evaluation of antibacterial effects of different fractions of ethanol extract of teucrium polium on selected gram positive and gram negative bacteria by bio-authography method and determination mic; an evaluation of the antimicrobial effect of allium sativum (garlic) on staphylococcus aureus, escherichia coli, salmonella, bacillus subtilis, staphylococcus epidermidis, pseudomonas aeruginosa, bacillus cereus & streptococcus pyogenes; effect of halopriming on germination of ocimum basilicum and coriandrum sativum; growth indices of sweet basil (ocimum bacilicum) affected by cmbination of biologic and priming seed treatments; effect of combined biologic and priming seed treatments on P and K concentration in shoot of nigella sativa L; effects of different treatments on microspore embryogenesis in thymus daenensis; knowledge, attitude and practice of people in rural area of sihakal toward medicinal plants, Guilan, 2012; the effect of feeding different levels of sunflower seed on dissipation count of white blood cells in laying hens; effect of solvent on the quality and quantity of tannin extraction from mentha piperita; effect of extraction solvent on the etraction of anthocyanins from mint; phylogenetic studies of crocus species native to Iran with survey protein profiles; morphological diversity among wild populations of salvia sahendica (lamiaceae) in Iran; chemical variability in the essential oil constituents of salvia hypoleuca, an endemic species from Iran; effect propagation conditions on rooting of zataria multiflora wood cuttings; a study on antibacterial properties of zataria multifelora plant; effect of curcumin on serum enzyme activity and histological changes in liver tissue in adrenalectomized rats; preparation of human serum albumin nanoparticles for natural compound delivery; investigation of anti helicobacter pylori activity of four Iranian medicinal plants; effects of rosmarinus officinalis and peganume harmala on isolated rat pancreatic islets; comparative anatomical study of the stem in dracocephalum species (lamiaceae) in Iran; extraction of glycyrrhizic acid from licorice root using ultrasonic technique; nanoemulsification of thymus daenensis essential oil; estimation of radiation use efficiency in fenugreek (trigonella foenum-graecum L.) under different treatments of animal manure; leaf area index simulation of fenugreek (trigonella foenum-graecum L.)under optimum condition in mashhad; leaf area estimation of summer savory (satureja hortensis L.) by total dry weight equation in different plant density; effect of plant density on radiation interception and use efficiency of summer savory (satureja hortensis L.); in vivo spawn production of wild and domestic white button mushroom (agaricus bisporus); the effect of different concentrations of BA and 2, 4 -D on tissue culture of neem (azadirachta indica L.); 441variability of essential oil content and morphological traits of wild myrtel (myrtus communis) populations in Iran; relationship of stomatal length and frequency with ploidy level in satureja species (lamiaceae); variability of agro-morphological traits and oil content among Iranian artemisia dracunculus L,.) accessions; the effectt of drying method on the essential oil yield and carvacrol content of satureja khuzistanica jamzad and satureja rechingeri jamzad; rosmarinic acid content and in vitro antibacterial activity of the methanolic extract of endemic satureja species growing in Iran; morphological diversity among wild populations of salvia mirzayanii (lamiaceae) in Iran; phytochemical investigation on nepeta denudate benth. and study of the biological activities of its components; micropropagation of lemon verbena (lippiacitriodora); enantioseparation of atropine and ammonium glufosinate by cellulose tris-phenylcarbamat chiral stationary phase in analytical scale; purification, identification and bio assays studies of cyclic peptides from

viola ignobilis; evaluation of anti-viral effects of thymus vulgaris L. extract against of herpes simplex virus type 1 on human cell culture; evaluation of anti-viral effects of rutagraveolens L.extract against of herpes simplex virus type 1 on human cell culture; effect of green tea (camellia sinensis) extract on sperm parameters in adult male rats; effects of copper and zinc on chlorophyll content, leaf area, biomass and essential oil content in savory (satureja hortensis L.); essential oil composition of tanacetum abrotanifolium (asteraceae) from Iran; essential oil composition of acorus calamus L. (acoraceae) from north of Iran; chemical variability in the essential oil composition of five thymus L. species in north of Iran; analysis of essential oils from inflorescens and seeds of peucedanum ruthenicum M.B., a plant endemic to Iran; evalluation on performance of mentha piperita by application of organic and biological inputs under organihume planting bed; in vitro shoot proliferation of myrtus communis L. from field-grown plants; the first report on observation of indole 3-butyric acid in Iranian isolates of cyanobacteria; chemical composition of the essential oil of three tanacetum species from north-west of Iran; chemical composition of the essential oil of tanacetum polycephalum schultz-bip. subsp polycephalum from different location of azarbaeijan province in Iran; isolation of two abietane diterpenoids from the root extract of salvia leriifolia; morphological diversity among wild populations of salvia mirzayanii (lamiaceae) in Iran; simultaneous determination and quantification of flavonoids in 8 Iranian species of dracocephalum by HPLC method; two sesterterpenoids from salvia lachnocalyx; extraction of cyclotide from viola ignobilis by the use microwave assisted extraction method; identification of volatile organic compounds in bacillus thuringiensis before and after silver nanoparticles treatments and its influence on the nature of the peppermint essential oils; a new monoterpene ester derivative from aerial parts of ferula ovina boiss; chemical composition of plant extracts from ferula hirtella and prangos acaulis; the effect of microencapsulation on the antioxidative capacity of color compounds of berberies (berberis vulgaris); HPLC determination of phenolic acids in four salvia species with their antioxidant activities; measurement of water requirement and crop coefficient of basil in ardabil; an overveiw on phytoremediation of hydrocarbon pollutions in soil; acaricidal effects of some formulated compositions based on peppermint and rosemary essential oils against the two-spotted spider mite (tetranychus urticae koch); in vitro antifungal activity of various methanolic plant extracts against alternaria solani; early season weed control in fennel (foeniculum vulgare mill.) with reduced rate of pendimethalin; isolation and identification of the main constituents of anthemis hussknechtii; antibacterial effects of solvent extracted materials of prosopis juliflora aerial parts; phytochemical analysis and antibacterial effect of achillea tenuifolia lam; evalution the yield and yield components of cumin landraces (cuminum cyminum L.) as affected by the bio--fertilizer under drought stress; comparison of different extraction methods in the extraction of essential oils from dracocephalum kotschyi; evaluation of total phenolic contents and antioxidant activities of three apple (malus domestica L) cultivars grown in west Azerbayjan; study the ethnobotany of medicinal plants in darab, fars province; effects of different concentrations of zinc element on morpho-physiological traits of fenugreek (trigonella foenum- graecum) in hydroponic conditions; chromatographic purification of lycopene and beta--carotene isolated from two Iranian species of cyanobacteria; inhibitory effects of vitexin on scopolamine-induced memory impairment in rats; quality and quantity assay of tannins in fruit bark of three cultivars of Iranian pomegranate; the effect of PH on stability of the anthocyanin--copigment complex in azarshahr red onion (allium cepa); effect of salysilic acid application and water stresses on yeild and quility of german chamomle (matricaria chamomilla L.); methanolic date seed extract effect on programmed cell death in human colorectal adenocarcinoma cell line (HT29); chemical constitutes of the essential oil of artemisia chamaemelifolia vill; stimulation of yield and physiological factors of mint (mentha piperita L.) with foliar application of biostimulators; finding high- quality method for DNA extraction from zizophora clinopodioides; the reaction of balm (melissa officinalis L.) to drought stress; studying of seed yield and yield components of different ecotype of coriandrum sativum in climate of ardabil; effect of polyvinylpyrrolidone (PVP) on induction and multiplication of callus on Iranian hypericum perforatum L.; the combination of hydrophobic absorbent and hydrophilic interaction liquid chromatography for separation and purification of 10-deacetyl baccatin III and taxol separately; evaluation of seasonal effects on transplanting of ferula gummosa from wild to green hose; the

rooting of ziziphora tenuir L. stem cuttings without using of chemical hormones; metabolomics-based approaches and its applications in medicinal plants studies; case study on thymus vulgaris; anti-diabetic, antimicrobial and antioxidant activities of various solvent extracts from eleven medicinal plants and essential oil composition of convolvulus persicus L.

Conference Information: 2nd National Congress on Medicinal Plants (2nd)Iran, Islamic Republic of. Conference Start: 20130515 Conference End: 20130516

Publisher: School of Pharmacy, Shaheed Beheshti University of Medical Sciences

Publication Type: Journal: Conference Review

Subject Headings:
*medicinal plant
germination
Thymus (plant)
concentration (parameters)
Iran
plant seed
rat
plant leaf
callus (plant)
species
plant
antioxidant activity
basil
drought stress
gall (plant)
thymus
plant growth
fennel
parameters
Salvia
in vitro study
thyme
date (fruit)
chemical composition
cock (bird)
morphological trait
male
Artemisia
savory
fenugreek
salt stress
Satureja hortensis
garlic
population
flower
black cumin
human
antimicrobial activity
cumin
extraction
cow (mammal)
cultivar
salinity
Achillea
female
mouse
broiler
irrigation (agriculture)
diabetes mellitus
Melissa officinalis

fruit (structure)
antibacterial activity
myrtle
ecotype
Calendula officinalis
Aloe vera
safflower
plant density
manure
explant
Tuber (genus)
Crocus sativus
rosemary
alcoholism
artichoke
chicken
marigold
fruit
Echinacea purpurea
pomegranate
Silybum marianum
Zataria multiflora
Portulacaceae
intercropping
toxicity
vermicompost
Artemisia dracunculus
climate
morphology
seedling
coriander
weed
microwave radiation
Staphylococcus aureus
genotype
anise
genetic variability
grain (structure)
Ocimum
herb
Mentha piperita
serum
squash
Mentha
colocynth
sowing date
parsley
Tanacetum
tissue culture
Ferula
flowering
Urtica dioica
germander
mycorrhiza
dill
Portulaca oleracea
high performance liquid chromatography
lemon
Berberis
chlorophyll content

Nepeta
cytotoxicity
alfalfa
Cucurbita pepo
planting time
Matricaria recutita
harvesting
hydrodistillation
Foeniculum
Ammi
seed yield
storage
Allium
Borago
suspension cell culture
Plantago
Stachys
fungus
shallot
Chrysoperla carnea
Pelargonium
Rubia
weight
antifungal activity
rainbow trout
ultrasound
lavender
mucilage
laboratory
harvest period
pollen
growth curve
Eucalyptus
Lavandula angustifolia
oak
cell line
temperature
summer
bacterium
soil
Pistacia
alga
embryo (anatomy)
metabolite
density
rooting
olive
Hibiscus sabdariffa
city
galbanum
drought
bile
phylogeny
cell suspension
growth regulation
biomass
rabbit
oregano
blood
arbuscular mycorrhiza

Agastache
Rosa damascena
gas
model
water stress
salt tolerance
Anthemis
adult
rangeland
Trigonella
Lamiaceae
weed control
cancer cell culture
Matricaria chamomilla
Hyoscyamus
heat stress
micropropagation
leaf area
lipid peroxidation
onion
Salvia officinalis
stem cutting
Artemisia vulgaris
Citrullus
flour
dormancy
compost
liver
Scrophulariaceae
Matricaria
Glycyrrhiza glabra
Hypericum perforatum
callus culture
hairy root culture
Avicennia
Vitex
Escherichia coli
harvest
Bacillus cereus
bark
Chrysopidae
color
carp
Rumex
tea
moisture
supplementation
inoculation
Lippia
purification
Calendula
linseed
moth
Lycium
comparative study
cut flower
Euphorbia
screening
chicory
Glycyrrhiza

Sophora
celery
Sargassum
hen
Herpes simplex virus 1
mortality
tissues
herbal medicine
callus
Salmonella typhimurium
Laurus nobilis
disk diffusion
sea
medicinal species
Mentha spicata
watercress
culture medium
fertilizer application
Ruta graveolens
antineoplastic activity
Cinnamomum zeylanicum
phytochemistry
Taxus baccata
case study
planting density
Curcuma longa
Phlomis
season
liver toxicity
DNA extraction
clove
vegetable
pH
Echinacea
powder
Pseudomonas aeruginosa
Viola tricolor
microalga
Gracilaria
Tanacetum parthenium
postharvest period
inflorescence
biological activity
tomato
developmental stage
Carum
embryo
Securidaca
motoneuron
magnetic field
Myricaceae
Sambucus
Azerbaijan
forest
newborn
grain yield
synthesis
mangrove
caraway
grain

genus
symbiosis
wound
food
engineering
solvent extraction
healing
meat
Fritillaria
Coturnix japonica
environmental factor
biosynthesis
Malva
coastal waters
water deficit
regeneration
sweet potato whitefly
gene expression
photosynthesis
antiinflammatory activity
diet
chick
Campylobacter jejuni
Aspergillus flavus
sour orange
Oman
abiotic stress
Mentha longifolia
enzyme activity
breast cancer
Azadirachta indica
sperm
bean
petal
flora
brown alga
radiation
Chenopodium album
Juniperus
Ajuga
tree
Wistar rat
Rheum
Asteraceae
ploidy
Bacillus thuringiensis
milk
Laurus
Crataegus
fiber
Linum
fermentation
Ricinus communis
Silene
Verbenaceae
flax
Klebsiella pneumoniae
Fumaria
pepper
dermatitis

cinnamon
path analysis
fingerling
grape
Atropa
anatomical concepts
wound healing
oral drug administration
aging
antidiabetic activity
prostate cancer
sweet orange
subspecies
puberty
cardamom
lymphocyte
pistachio
sciatic nerve
Thiobacillus
immune response
immune system
Marrubium
scar formation
sprout
willow
Aegle marmelos
Cirsium
dry weight
nonalcoholic fatty liver
apricot
patient
Salmonella enteritidis
cell strain MCF 7
tail suspension test
vapor
ginger
Valeriana officinalis
aroma
plant disease
examination
solid phase microextraction
plant regeneration
diseases
bioassay
nutrition
essential oil
antioxidant
fertilizer
flavonoid
salicylic acid
antiinfective agent
acid
iron
plant medicinal product
water
methanol
peppermint
alcohol
plant extract
heavy metal

enzyme
phenol
phenol derivative
anthocyanin
chamomile
phytohormone
nitrogen fertilizer
nitrogen
peroxidase
free radical
carvacrol
rosmarinic acid
proline
zinc
marker
phosphorus
antibiotic agent
silver nanoparticle
ispagula
solvent
jasmonic acid methyl ester
cadmium
fatty acid
organic fertilizer
cannabis
thymol
ascorbic acid
sodium chloride
chlorophyll
humic acid
fumigant
carbohydrate
streptozocin
hormone
curcumin
polyphenol
protein
antifungal agent
polymer
ion
pigment
mannan
sulfur
vegetable oil
carbon tetrachloride
trace element
carotenoid
atropine
putrescine
natural product
liver enzyme
amino acid
oxidizing agent
eugenol
antidepressant agent
metal
alkaloid
magnetic nanoparticle
rutoside
silver

titanium dioxide
coumarin
silicon
terpene
volatile agent
nitric oxide
iron chelate
Ruta graveolens extract
chlormequat
mineral
DNA
colchicine
paclitaxel
absorbent
potassium nitrate
arsenic
corn oil
glycoside
flavonol
kinetin
imidacloprid
fennel oil
gum tragacanth
vitamin
pectin
sedative agent
chamazulene
parthenolide
lavender oil
synthetase

Source: EMBASE

Full Text: Available from *National Library of Medicine* in *Iranian Journal of Pharmaceutical Research : IJPR*

85. Candida vaginitis during contraceptive use: the influence of methods, antifungal susceptibility and virulence patterns.

Citation: Journal of obstetrics and gynaecology : the journal of the Institute of Obstetrics and Gynaecology, Nov 2013, vol. 33, no. 8, p. 850-856, 1364-6893 (November 2013)

Author(s): Güzel, A B; Küçükgöz-Güleç, U; Aydin, M; Gümral, R; Kalkanci, A; Ilkit, M

Abstract: No consensus exists about whether contraceptives cause an increased risk of vaginitis, including vulvovaginal candidosis (VVC). We investigated 495 women (252 who used contraceptives; 243 who did not) for the presence of VVC. Antifungal susceptibility testing was performed for five antifungal agents and for boric acid, and three virulence factors were also examined. We recovered 129 (26.1%) monofungal populations from vaginal samples of women with acute VVC (AVVC, n = 18), symptomatic recurrent VVC (RVVC, n = 22) and asymptomatic RVVC (n = 28), as well as of other contraceptive users who carried Candida in their vaginas (n = 61). It is important to note that the women who had VVC used the same contraceptive methods ($p > 0.05$). Candida albicans was the most common species isolated (45%), followed by C. glabrata (40.3%). Most of the vaginal yeast isolates exhibited low minimum inhibitory concentration levels for the five antifungals tested. However, this was not the case for boric acid. In addition, the yeast fungi that was derived from the AVVC and RVVC patients showed higher amounts of haemolytic activity than the yeast fungi found among the controls ($p < 0.05$). The use of contraception does not predispose women to VVC ($p > 0.05$). Also, both host- and organism-related factors were required to achieve optimal clinical treatment for VVC.

Subject Headings: Turkey
Contraceptive Devices

Prevalence
Adolescent
Contraception
Candida albicans
Middle Aged
Candidiasis Vulvovaginal
Humans
Index Medicus
Contraception Behavior
Young Adult
Adult
Female
Contraceptive Agents
Candida glabrata
Drug Resistance Fungal

Source: Medline

Full Text: Available from *EBSCOhost* in *Journal of Obstetrics & Gynaecology*

86. Candida vaginitis during contraceptive use: The influence of methods, antifungal susceptibility and virulence patterns

Citation: Journal of Obstetrics and Gynaecology, November 2013, vol./is. 33/8(850-856), 0144-3615;1364-6893 (November 2013)

Author(s): Guzel A.B.; Kucukgoz-Gulec U.; Aydin M.; Gumral R.; Kalkanci A.; Ilkit M.

Institution: (Guzel, Kucukgoz-Gulec) Department of Obstetrics and Gynaecology Microbiology, Faculty of Medicine, University of Cukurova, Adana, 01330, Turkey; (Aydin, Kalkanci) Division of Mycology, Department of Microbiology, University of Cukurova, Adana, Turkey; (Aydin) Department of Microbiology, Faculty of Medicine, University of Gazi, Ankara, Turkey; (Gumral) Department of Microbiology, Faculty of Medicine, Erzincan University, Erzincan, France; (Ilkit) Department of Microbiology, Gulhane Military Medical Academy, Ankara, Turkey

Language: English

Abstract: No consensus exists about whether contraceptives cause an increased risk of vaginitis, including vulvovaginal candidosis (VVC). We investigated 495 women (252 who used contraceptives; 243 who did not) for the presence of VVC. Antifungal susceptibility testing was performed for five antifungal agents and for boric acid, and three virulence factors were also examined. We recovered 129 (26.1%) monofungal populations from vaginal samples of women with acute VVC (AVVC, n = 18), symptomatic recurrent VVC (RVVC, n = 22) and asymptomatic RVVC (n = 28), as well as of other contraceptive users who carried Candida in their vaginas (n = 61). It is important to note that the women who had VVC used the same contraceptive methods ($p > 0.05$). Candida albicans was the most common species isolated (45%), followed by C. glabrata (40.3%). Most of the vaginal yeast isolates exhibited low minimum inhibitory concentration levels for the five antifungals tested. However, this was not the case for boric acid. In addition, the yeast fungi that was derived from the AVVC and RVVC patients showed higher amounts of haemolytic activity than the yeast fungi found among the controls ($p < 0.05$). The use of contraception does not predispose women to VVC ($p > 0.05$). Also, both host- and organism-related factors were required to achieve optimal clinical treatment for VVC. © 2013 Informa UK, Ltd.

Country of Publication: United Kingdom

Publisher: Informa Healthcare (69-77 Paul Street, London EC2A 4LQ, United Kingdom)

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 23593-75-1 (clotrimazole); 86386-73-4 (fluconazole); 84625-61-6 (itraconazole); 65277-42-1 (ketoconazole); 22916-47-8 (miconazole)

Publication Type: Journal: Article

Subject Headings: acute disease

adult
*antifungal susceptibility
article
asymptomatic infection
*Candida
Candida albicans
Candida glabrata
Candida keyfr
Candida krusei
Candida tropicalis
Clavispora lusitaniae
coitus interruptus
condom
*contraception
controlled study
female
*fungal virulence
fungus isolation
hemolysis
human
intrauterine contraceptive device
Kluyveromyces marxianus
lifestyle
major clinical study
minimum inhibitory concentration
prevalence
priority journal
recurrent infection
Saccharomyces
Saccharomyces kudriavzevii
vagina
*vagina candidiasis
*vulvovaginal candidosis
boric acid
clotrimazole
fluconazole
itraconazole
ketoconazole
miconazole
oral contraceptive agent
"virulence factor/ec [Endogenous Compound]"

Source: EMBASE

Full Text: Available from *EBSCOhost* in *Journal of Obstetrics & Gynaecology*

87. The antimicrobial effect of boric acid on trichomonas vaginalis

Citation: Sexually Transmitted Diseases, 2014, vol./is. 41/12(718-722), 0148-5717;1537-4521 (2014)

Author(s): Brittingham A.; Wilson W.A.

Institution: (Brittingham) Department of Microbiology and Immunology, Des Moines University, 3200 Grand Ave, Des Moines, IA 50312, United States; (Wilson) Department of Biochemistry and Nutrition, Des Moines University, Des Moines, IA, United States

Language: English

Abstract: Background: The treatment options for trichomoniasis are largely limited to nitroimidazole compounds (metronidazole and tinidazole). Few alternatives exist in cases of recalcitrant infections or in cases of nitroimidazole hypersensitivity. Recently, the intravaginal administration of boric acid has been advocated as an alternative treatment of trichomoniasis. However, no in vitro studies are available that directly assess the

sensitivity of Trichomonas vaginalis to boric acid. Methods: We examined the sensitivity of common laboratory strains and recent clinical isolates of T. vaginalis to boric acid. The effect of increasing concentrations of boric acid on parasite growth and viability was determined, and a minimal lethal concentration was reported. The effect of pH on boric acid toxicity was assessed and compared with that of lactic and acetic acid. Results: Boric acid is microbicidal to T. vaginalis, and its antitrichomonal activity is independent of environmental acidification. Unlike acetic acid and lactic acid, boric acid exposure results in growth suppression and lethality over a wide range of pH (5 7) and under conditions that are normally permissible for growth in vitro. Conclusions: The microbicidal effect of boric acid on T. vaginalis, coupled with its previous clinical use in treating vaginal candidiasis, supports the continued inclusion of boric acid in the therapeutic arsenal for treating trichomoniasis.

Country of Publication: United States

Publisher: Lippincott Williams and Wilkins

CAS Registry Number: 127-08-2 (acetic acid); 127-09-3 (acetic acid); 64-19-7 (acetic acid); 71-50-1 (acetic acid); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 113-21-3 (lactic acid); 50-21-5 (lactic acid)

Publication Type: Journal: Article

Subject Headings:
acidification
*antibacterial activity
antibiotic sensitivity
article
clinical assessment
clinical effectiveness
concentration response
*drug effect
growth inhibition
human
in vitro study
laboratory test
lethal dose
lethality
nonhuman
parasite isolation
pH
sensitivity analysis
Trichomonas vaginalis
*trichomoniasis
"acetic acid/cm [Drug Comparison]"
"*antibiotic agent/cm [Drug Comparison]"
"*antibiotic agent/an [Drug Analysis]"
"*antibiotic agent/dv [Drug Development]"
"*antibiotic agent/pd [Pharmacology]"
"*boric acid/cm [Drug Comparison]"
"*boric acid/an [Drug Analysis]"
"*boric acid/dv [Drug Development]"
"*boric acid/pd [Pharmacology]"
"lactic acid/cm [Drug Comparison]"
"microbicide/an [Drug Analysis]"
"microbicide/dv [Drug Development]"
"microbicide/pd [Pharmacology]"

Source: EMBASE

88. Recurrent vulvo-vaginal candida infection

Citation: European Journal of Contraception and Reproductive Health Care, May 2014, vol./is. 19/(S21-S22), 1362-5187 (May 2014)

Author(s): Horner P.

Institution: (Horner) University of Bristol, Bristol, United Kingdom

Language: English

Abstract: Recurrent vulvo-vaginal candidiasis (VVC) occurs in ~ 5% of women with VVC. It is defined as at least 4 episodes annually and is usually caused by Candida albicans but may be due to non Candida albicans spp . such as C. glabrata or less commonly C. krusei . Poorly controlled diabetes mellitus and antimicrobial therapy are predisposing factors as is pregnancy and high dose oestrogen combined oral contraception. Premenstrual exacerbation of vulvovaginal symptoms attributed to Candida spp. may be due to an increase in microorganism load during the luteal phase. While there is evidence that the sexual partner is at increased risk of being colonised with the same strain the contribution of sexual transmission to the pathogenesis remains unclear. There is limited evidence to support reinfection from an intestinal reservoir. The role of tight fitting underwear is unclear and there is no evidence that iron deficiency anaemia predisposes women to recurrent VVC. Unfortunately candidiasis or "thrush" is often the lay persons term to describe any vaginal discharge with or without irritation and many women with recurrent VVC do not indeed have VVC. There is a wide differential diagnosis ranging from non-infectious aetiologies such as allergic or hypersensitivity vulvitis to other infectious causes such as bacterial vaginosis. It is therefore important that confirmation of the diagnosis is established by culture and/or microscopy. Following diagnosis, advice on avoiding possible predisposing factors is often of limited value. Initial antimycotic therapy requires an induction course with either an oral and/or vaginal antimycotic agent until the patient is asymptomatic and culture negative. Failure to continue with a maintenance regimen will result in relapse of VVC in 50% at 3 months. Fluconazole 150mgs or a clotrimazole 500mgs pessary weekly can be used for six months. There is no evidence that this can result in antimicrobial resistance. Unfortunately on stopping therapy about 40-50% relapse and the reason for this is unclear. Antimicrobial resistant recurrent VVC is rare unless the patient is immunocompromised. However some women will be colonised by non- albicans species, the majority of which show reduced susceptibility to azoles. Typing and antimicrobial resistance testing should be undertaken on women who do not respond to induction therapy, the results of which can inform future therapy. Nystatin pessaries, Boric acid 600mgs as a gelatin capsule or amphotericin B 50mg suppositories administered vaginally, daily for 14-21 days have been shown to be moderately effective in clinically resistant infection.

Conference Information: 13th Congress of the European Society of Contraception and Reproductive Health Lisbon Portugal. Conference Start: 20140528 Conference End: 20140531

Publisher: Informa Healthcare

Publication Type: Journal: Conference Abstract

Subject Headings:

*society
*contraception
*reproductive health
*candidiasis
female
human
therapy
antibiotic resistance
patient
vagina pessary
relapse
Candida albicans
disease predisposition
diagnosis
drug megadose
reinfection
pathogenesis
iron deficiency anemia
vagina discharge

sexual transmission
risk
sexuality
pregnancy
vagina candidiasis
luteal phase
microorganism
antimicrobial therapy
vaginitis
Candida
suppository
microscopy
oral contraception
diabetes mellitus
vulvitis
hypersensitivity
etiology
differential diagnosis
species
infection
antifungal agent
fluconazole
clotrimazole
nystatin
estrogen
antiinfective agent
pyrrole derivative
boric acid
gelatin
amphotericin B

Source: EMBASE

Full Text: Available from *EBSCOhost* in *European Journal of Contraception & Reproductive Health Care*

89. Management of persistent vaginitis.

Citation: Obstetrics and gynecology, Dec 2014, vol. 124, no. 6, p. 1135-1146, 1873-233X (December 2014)

Author(s): Nyirjesy, Paul

Abstract: With vaginitis remaining a common condition that leads women to seek care, it is not surprising that some women develop chronic vulvovaginal problems that are difficult to diagnose and treat. With a differential diagnosis that encompasses vulvar disorders and infectious and noninfectious causes of vaginitis, accurate diagnosis is the cornerstone of choosing effective therapy. Evaluation should include a symptom-specific history, careful vulvar and vaginal examination, and office-based tests (vaginal pH, amine test, saline and 10% potassium hydroxide microscopy). Ancillary tests, especially yeast culture with speciation, are frequently crucial to obtaining a correct diagnosis. A heavy but normal physiologic discharge can be determined by excluding other causes. With vulvovaginal candidiasis, differentiating between Candida albicans and non-albicans Candida infection has important treatment ramifications. Most patients with C albicans infections can be successfully treated with maintenance antifungal therapy, usually with fluconazole. Although many non-albicans Candida, particularly Candida glabrata, may at times be innocent bystanders, vaginal boric acid therapy is an effective first choice for many true non-albicans Candida infections. Recurrent bacterial vaginosis, a difficult therapeutic challenge, can often be controlled with maintenance therapy. Multiple options, especially high-dose tinidazole, have been used for metronidazole-resistant trichomoniasis. With the aging of the U.S. population, atrophic vaginitis and desquamative inflammatory vaginitis, both associated with hypoestrogenism, are encountered frequently in women with persistent vaginitis.

Subject Headings: Vaginitis
Humans
Index Medicus
Vagina
Female
Abridged Index Medicus
Chronic Disease

Source: Medline

90. The antimicrobial effect of boric acid on Trichomonas vaginalis.

Citation: Sexually transmitted diseases, Dec 2014, vol. 41, no. 12, p. 718-722, 1537-4521 (December 2014)

Author(s): Brittingham, Andrew; Wilson, Wayne A

Abstract: The treatment options for trichomoniasis are largely limited to nitroimidazole compounds (metronidazole and tinidazole). Few alternatives exist in cases of recalcitrant infections or in cases of nitroimidazole hypersensitivity. Recently, the intravaginal administration of boric acid has been advocated as an alternative treatment of trichomoniasis. However, no in vitro studies are available that directly assess the sensitivity of Trichomonas vaginalis to boric acid. We examined the sensitivity of common laboratory strains and recent clinical isolates of T. vaginalis to boric acid. The effect of increasing concentrations of boric acid on parasite growth and viability was determined, and a minimal lethal concentration was reported. The effect of pH on boric acid toxicity was assessed and compared with that of lactic and acetic acid. Boric acid is microbicidal to T. vaginalis, and its antitrichomonal activity is independent of environmental acidification. Unlike acetic acid and lactic acid, boric acid exposure results in growth suppression and lethality over a wide range of pH (5-7) and under conditions that are normally permissible for growth in vitro. The microbicidal effect of boric acid on T. vaginalis, coupled with its previous clinical use in treating vaginal candidiasis, supports the continued inclusion of boric acid in the therapeutic arsenal for treating trichomoniasis.

Subject Headings: Administration Intravaginal
Trichomonas vaginalis
Humans
Index Medicus
Female
Boric Acids
Treatment Outcome
Anti-Infective Agents
Trichomonas Vaginitis

Source: Medline

91. Management of persistent vaginitis

Citation: Obstetrics and Gynecology, December 2014, vol./is. 124/6(1135-1146), 0029-7844;1873-233X (11 Dec 2014)

Author(s): Nyirjesy P.

Institution: (Nyirjesy) Department of Obstetrics and Gynecology, Drexel University School of Medicine, New College Building, 245 North 15th Street, Philadelphia, PA 19102, United States

Language: English

Abstract: With vaginitis remaining a common condition that leads women to seek care, it is not surprising that some women develop chronic vulvovaginal problems that are difficult to diagnose and treat. With a differential diagnosis that encompasses vulvar disorders and infectious and noninfectious causes of vaginitis, accurate diagnosis is the cornerstone of choosing effective therapy. Evaluation should include a symptom-specific history, careful vulvar and vaginal examination, and office-based tests (vaginal pH, amine test, saline and

10% potassium hydroxide microscopy). Ancillary tests, especially yeast culture with speciation, are frequently crucial to obtaining a correct diagnosis. A heavy but normal physiologic discharge can be determined by excluding other causes. With vulvovaginal candidiasis, differentiating between Candida albicans and non-albicans Candida infection has important treatment ramifications. Most patients with C albicans infections can be successfully treated with maintenance antifungal therapy, usually with fluconazole. Although many non-albicans Candida, particularly Candida glabrata, may at times be innocent bystanders, vaginal boric acid therapy is an effective first choice for many true nonalbicans Candida infections. Recurrent bacterial vaginosis, a difficult therapeutic challenge, can often be controlled with maintenance therapy. Multiple options, especially high-dose tinidazole, have been used for metronidazole-resistant trichomoniasis. With the aging of the U.S. population, atrophic vaginitis and desquamative inflammatory vaginitis, both associated with hypoestrogenism, are encountered frequently in women with persistent vaginitis.

Country of Publication: United Kingdom

Publisher: Lippincott Williams and Wilkins

CAS Registry Number: 18323-44-9 (clindamycin); 86386-73-4 (fluconazole); 31799-91-4 (hyaluronic acid); 9004-61-9 (hyaluronic acid); 9067-32-7 (hyaluronic acid); 50-23-7 (hydrocortisone); 65277-42-1 (ketoconazole); 39322-38-8 (metronidazole); 443-48-1 (metronidazole); 128607-22-7 (ospemifene); 11035-13-5 (paromomycin); 1263-89-4 (paromomycin); 1390-73-4 (paromomycin); 51795-47-2 (paromomycin); 54597-56-7 (paromomycin); 7542-37-2 (paromomycin); 84420-34-8 (paromomycin); 53-43-0 (prasterone); 19387-91-8 (tinidazole)

Publication Type: Journal: Article

Subject Headings:
antibiotic therapy
article
candidiasis
desquamative inflammatory vaginitis
"desquamative inflammatory vaginitis/dt [Drug Therapy]"
evaluation study
female
human
"trichomoniasis/dt [Drug Therapy]"
United States
"vagina atrophy/dt [Drug Therapy]"
"vagina candidiasis/dt [Drug Therapy]"
vagina discharge
"*vaginitis/dt [Drug Therapy]"
"clindamycin/dt [Drug Therapy]"
"estrogen/dt [Drug Therapy]"
"fluconazole/dt [Drug Therapy]"
"hyaluronic acid/dt [Drug Therapy]"
"hydrocortisone/dt [Drug Therapy]"
"ketoconazole/dt [Drug Therapy]"
"metronidazole/dt [Drug Therapy]"
"nitroimidazole derivative/dt [Drug Therapy]"
"ospemifene/dt [Drug Therapy]"
"paromomycin/dt [Drug Therapy]"
"prasterone/dt [Drug Therapy]"
"tinidazole/dt [Drug Therapy]"

Source: EMBASE

92. BASIC study: is intravaginal boric acid non-inferior to metronidazole in symptomatic bacterial vaginosis? Study protocol for a randomized controlled trial.

Citation: Trials, Jan 2015, vol. 16, p. 315., 1745-6215 (2015)

Author(s): Zeron Mullins, Melinda; Trouton, Konia M

Abstract: Bacterial vaginosis is associated with increased transmission of sexually transmitted infections, preterm labor, post-surgical infections, and endometritis. Current treatment for symptomatic bacterial vaginosis includes antibiotics, such as metronidazole, which are 70-80 % effective at one month after treatment and result in high recurrence rates and secondary candida infections. Intravaginal boric acid has been used for over a hundred years to treat vaginal infections, such as bacterial vaginosis. Boric acid is inexpensive, accessible, and has shown to be an effective treatment for other infections, such as vaginal candidiasis. To date, there has been no clinical trial evaluation of boric acid effectiveness to treat bacterial vaginosis. The BASIC (Boric Acid, Alternate Solution for Intravaginal Colonization) trial is a randomized, double-blinded, multicenter study. The study will enroll a minimum of 240 women of 16-50 years of age who are symptomatic with bacterial vaginosis. Eligible participants will have Amsel and Nugent scores confirming bacterial vaginosis. Women who are pregnant or menopausal or have other active co-infections will be excluded. Consenting participants who meet exclusion and inclusion criteria will be randomly assigned to one of three treatment groups: boric acid, metronidazole, or an inert placebo. Self-administration of treatment intravaginally for 10 days will be followed by clinical assessment at 7 and 30 days (days 17 and 40, respectively) after the end of the treatment phase. Primary outcome is a non-inferiority, per-protocol comparison of the effectiveness of boric acid with that of metronidazole at day 17, as measured by the Nugent score in 16-50 year olds. Secondary outcomes include: non-inferiority, intention-to-treat comparison of effectiveness of boric acid with that of metronidazole at day 17, analysis for both per-protocol and intention-to-treat at day 40, and safety considerations, including adverse effects requiring patient discontinuation of treatment. This study will be the first to determine whether intravaginal boric acid is non-inferior to metronidazole in the treatment of bacterial vaginosis in symptomatic women. ClinicalTrials.gov NCT00799214, registered online Nov 10, 2008.

Subject Headings:
Intention to Treat Analysis
Research Design
British Columbia
Administration Intravaginal
Adolescent
Middle Aged
Time Factors
Humans
Index Medicus
Metronidazole
Treatment Outcome
Young Adult
Adult
Female
Anti-Bacterial Agents
Boric Acids
Remission Induction
Clinical Protocols
Double-Blind Method
Vaginosis Bacterial

Source: Medline

Full Text: Available from *BioMed Central* in *Trials*
Available from *National Library of Medicine* in *Trials*

93. Glucose tetrasaccharide (Glc4) instability in urine, resolved by use of a special collection tube

Citation: Molecular Genetics and Metabolism, February 2015, vol./is. 114/2(S96-S97), 1096-7192 (February 2015)

Author(s): Prunty H.; Lock P.; Harvey K.; Burke D.; Heales S.

Institution: (Prunty, Lock, Harvey, Burke, Heales) Great Ormond Street Hospital NHS Foundation Trust, London, United Kingdom

Language: English

Abstract: Urinary glucose tetrasaccharide (Glc4) is a useful biomarker in Pompe disease, being thought to reflect the degree of glycogen storage. However, we have occasionally observed unexpectedly low results in some patients which cannot be readily explained by the clinical picture despite our initial stability studies indicating that urinary Glc4 should be stable for at least 7 days at room temperature. Bacterial contamination was thought to be a possible explanation, particularly as samples are often collected into nappies or urine bags and transported at room temperature. As it is not practical for samples to be transported frozen, and use of an established preservative such as boric acid would potentially interfere with the analytical method, we investigated whether the addition of an ion exchange resin (Duolite MB-6113 resin, activated in 2 N acetic acid), used in the sample preparation step for the HPLC method employed in our laboratory, might have a secondary role as a urine preservative. To investigate this hypothesis, urine samples from Pompe patients (n =16) and infected urine samples obtained from the microbiology department (n= 5) were spiked with Glc4 and a portion analysed at baseline and again after 5 days incubation at room temperature; with and without addition of resin. Without resin, 7 of the Pompe urines showed complete degradation of Glc4, 3 showed partial (15%, 20%, 40%) degradation, and 10 showed no degradation. The degradation did not correlate with apparent evidence of bacterial contamination on pH or Multistix analysis. These urines will be sent for microbial culture to investigate further. Of the known infected urines, those infected with Escherichia coli (n= 4) showed no degradation of Glc4, whereas a urine with mixed growth of coliform, Streptococcus B, and Candida albicans (n =1) showed complete degradation of Glc4. However, the addition of the ion exchange resin prior to incubation stabilised the urinary Glc4, preventing degradation in all samples. In summary, urinary Glc4 may be subject to degradation in some cases. This is most likely due to the presence of bacteria or other microorganisms, but is dependent upon the type of organisms present. Stability is variable and suitability of urine samples cannot be predicted by pH or Multistix results. Most importantly, regardless of the cause, the addition of an ion exchange resin at baseline stabilised urinary Glc4 for at least 5 days at room temperature in all of the cases studied so far. We therefore propose the use of a special urine collection tube pre-loaded with ion exchange resin to prevent Glc4 degradation and to ensure more meaningful and reliable results.

Conference Information: 11th Annual Research Meeting of the Lysosomal Disease Network, WORLD Symposium, 2015 Orlando, FL United States. Conference Start: 20150209 Conference End: 20150213

Publisher: Academic Press Inc.

Publication Type: Journal: Conference Abstract

Subject Headings:
*urine
*tube
room temperature
urinalysis
human
patient
bacterium contamination
pH
storage
analytic method
glycogen storage disease type 2
glucose urine level
Candida albicans
Streptococcus agalactiae
Escherichia coli
microbiology
hypothesis
laboratory
Bacteria
microorganism
high performance liquid chromatography
*glucose

*tetrasaccharide
ion exchange resin
resin
preservative
glycogen
biological marker
boric acid
acetic acid

Source: EMBASE

94. Guideline: vulvovaginal candidosis (AWMF 015/072), S2k (excluding chronic mucocutaneous candidosis).

Citation: Mycoses, Mar 2015, vol. 58 Suppl 1, p. 1-15, 1439-0507 (March 2015)

Author(s): Mendling, Werner; Brasch, J; Cornely, O A; Effendy, I; Friese, K; Ginter-Hanselmayer, G; Hof, H; Mayser, P; Mylonas, I; Ruhnke, M; Schaller, M; Weissenbacher, E-R

Abstract: The oestrogenised vagina is colonised by Candida species in at least 20% of women; in late pregnancy and in immunosuppressed patients, this increases to at least 30%. In most cases, Candida albicans is involved. Host factors, particularly local defence mechanisms, gene polymorphisms, allergies, serum glucose levels, antibiotics, psycho-social stress and oestrogens influence the risk of candidal vulvovaginitis. Non-albicans species, particularly Candida glabrata, and in rare cases also Saccharomyces cerevisiae, cause less than 10% of all cases of vulvovaginitis with some regional variation; these are generally associated with milder signs and symptoms than normally seen with a C. albicans-associated vaginitis. Typical symptoms include premenstrual itching, burning, redness and odourless discharge. Although itching and redness of the introitus and vagina are typical symptoms, only 35-40% of women reporting genital itching in fact suffer from vulvovaginal candidosis. Medical history, clinical examination and microscopic examination of vaginal content using 400× optical magnification, or preferably phase contrast microscopy, are essential for diagnosis. In clinically and microscopically unclear cases and in chronically recurring cases, a fungal culture for pathogen determination should be performed. In the event of non-C. albicans species, the minimum inhibitory concentration (MIC) should also be determined. Chronic mucocutaneous candidosis, a rarer disorder which can occur in both sexes, has other causes and requires different diagnostic and treatment measures. Treatment with all antimycotic agents on the market (polyenes such as nystatin; imidazoles such as clotrimazole; and many others including ciclopirox olamine) is easy to administer in acute cases and is successful in more than 80% of cases. All vaginal preparations of polyenes, imidazoles and ciclopirox olamine and oral triazoles (fluconazole, itraconazole) are equally effective (Table); however, oral triazoles should not be administered during pregnancy according to the manufacturers. C. glabrata is not sufficiently sensitive to the usual dosages of antimycotic agents approved for gynaecological use. In other countries, vaginal suppositories of boric acid (600 mg, 1-2 times daily for 14 days) or flucytosine are recommended. Boric acid treatment is not allowed in Germany and flucytosine is not available. Eight hundred-milligram oral fluconazole per day for 2-3 weeks is therefore recommended in Germany. Due to the clinical persistence of C. glabrata despite treatment with high-dose fluconazole, oral posaconazole and, more recently, echinocandins such as micafungin are under discussion; echinocandins are very expensive, are not approved for this indication and are not supported by clinical evidence of their efficacy. In cases of vulvovaginal candidosis, resistance to C. albicans does not play a significant role in the use of polyenes or azoles. Candida krusei is resistant to the triazoles, fluconazole and itraconazole. For this reason, local imidazole, ciclopirox olamine or nystatin should be used. There are no studies to support this recommendation, however. Side effects, toxicity, embryotoxicity and allergies are not clinically significant. Vaginal treatment with clotrimazole in the first trimester of a pregnancy reduces the rate of premature births. Although it is not necessary to treat a vaginal colonisation of Candida in healthy women, vaginal administration of antimycotics is often recommended in the third trimester of pregnancy in Germany to reduce the rate of oral thrush and napkin dermatitis in healthy full-term newborns. Chronic recurrent vulvovaginal candidosis continues to be treated in intervals using suppressive therapy as long as immunological treatments are not available. The relapse rate associated with

weekly or monthly oral fluconazole treatment over 6 months is approximately 50% after the conclusion of suppressive therapy according to current studies. Good results have been achieved with a fluconazole regimen using an initial 200 mg fluconazole per day on 3 days in the first week and a dosage-reduced maintenance therapy with 200 mg once a month for 1 year when the patient is free of symptoms and fungal infection (Table). Future studies should include Candida autovaccination, antibodies to Candida virulence factors and other immunological experiments. Probiotics with appropriate lactobacillus strains should also be examined in future studies on the basis of encouraging initial results. Because of the high rate of false indications, OTC treatment (self-treatment by the patient) should be discouraged. © 2015 Blackwell Verlag GmbH.

Subject Headings:
Candida albicans
Humans
Candidiasis Vulvovaginal
Antifungal Agents
Microscopy Phase-Contrast
Vaginal Discharge
Pregnancy Complications Infectious
Pregnancy
Germany
Female
Infant Newborn
Index Medicus
Candida glabrata
Microbial Sensitivity Tests

Source: Medline

Full Text: Available from *EBSCOhost* in *Mycoses*

95. Guideline: vulvovaginal candidosis (AWMF 015/072), S2k (excluding chronic mucocutaneous candidosis)

Citation: Mycoses, March 2015, vol./is. 58/(1-15), 1439-0507 (01 Mar 2015)

Author(s): Mendling W.

Institution: (Mendling) Deutsches Zentrum fur Infektionen in Gynakologie und Geburtshilfe, Vogelsangstrasse 106, 42109 Wuppertal, Germany

Language: English

Abstract: The oestrogenised vagina is colonised by Candida species in at least 20% of women; in late pregnancy and in immunosuppressed patients, this increases to at least 30%. In most cases, Candida albicans is involved. Host factors, particularly local defence mechanisms, gene polymorphisms, allergies, serum glucose levels, antibiotics, psycho-social stress and oestrogens influence the risk of candidal vulvovaginitis. Non-albicans species, particularly Candida glabrata, and in rare cases also Saccharomyces cerevisiae, cause less than 10% of all cases of vulvovaginitis with some regional variation; these are generally associated with milder signs and symptoms than normally seen with a C. albicans-associated vaginitis. Typical symptoms include premenstrual itching, burning, redness and odourless discharge. Although itching and redness of the introitus and vagina are typical symptoms, only 35-40% of women reporting genital itching in fact suffer from vulvovaginal candidosis. Medical history, clinical examination and microscopic examination of vaginal content using 400x optical magnification, or preferably phase contrast microscopy, are essential for diagnosis. In clinically and microscopically unclear cases and in chronically recurring cases, a fungal culture for pathogen determination should be performed. In the event of non-C. albicans species, the minimum inhibitory concentration (MIC) should also be determined. Chronic mucocutaneous candidosis, a rarer disorder which can occur in both sexes, has other causes and requires different diagnostic and treatment measures. Treatment with all antimycotic agents on the market (polyenes such as nystatin; imidazoles such as clotrimazole; and many others including ciclopirox olamine) is easy to administer in acute cases and is successful in more than 80% of cases. All vaginal preparations of polyenes, imidazoles and ciclopirox olamine and oral triazoles (fluconazole, itraconazole) are equally effective (Table); however, oral

triazoles should not be administered during pregnancy according to the manufacturers. C. glabrata is not sufficiently sensitive to the usual dosages of antimycotic agents approved for gynaecological use. In other countries, vaginal suppositories of boric acid (600 mg, 1-2 times daily for 14 days) or flucytosine are recommended. Boric acid treatment is not allowed in Germany and flucytosine is not available. Eight hundred-milligram oral fluconazole per day for 2-3 weeks is therefore recommended in Germany. Due to the clinical persistence of C. glabrata despite treatment with high-dose fluconazole, oral posaconazole and, more recently, echinocandins such as micafungin are under discussion; echinocandins are very expensive, are not approved for this indication and are not supported by clinical evidence of their efficacy. In cases of vulvovaginal candidosis, resistance to C. albicans does not play a significant role in the use of polyenes or azoles. Candida krusei is resistant to the triazoles, fluconazole and itraconazole. For this reason, local imidazole, ciclopirox olamine or nystatin should be used. There are no studies to support this recommendation, however. Side effects, toxicity, embryotoxicity and allergies are not clinically significant. Vaginal treatment with clotrimazole in the first trimester of a pregnancy reduces the rate of premature births. Although it is not necessary to treat a vaginal colonisation of Candida in healthy women, vaginal administration of antimycotics is often recommended in the third trimester of pregnancy in Germany to reduce the rate of oral thrush and napkin dermatitis in healthy full-term newborns. Chronic recurrent vulvovaginal candidosis continues to be treated in intervals using suppressive therapy as long as immunological treatments are not available. The relapse rate associated with weekly or monthly oral fluconazole treatment over 6 months is approximately 50% after the conclusion of suppressive therapy according to current studies. Good results have been achieved with a fluconazole regimen using an initial 200 mg fluconazole per day on 3 days in the first week and a dosage-reduced maintenance therapy with 200 mg once a month for 1 year when the patient is free of symptoms and fungal infection (Table). Future studies should include Candida autovaccination, antibodies to Candida virulence factors and other immunological experiments. Probiotics with appropriate lactobacillus strains should also be examined in future studies on the basis of encouraging initial results. Because of the high rate of false indications, OTC treatment (self-treatment by the patient) should be discouraged.

Country of Publication: Germany

Publication Type: Journal: Article

Subject Headings:
Candida albicans
Candida glabrata
"Candidiasis Vulvovaginal/di [Diagnosis]"
"Candidiasis Vulvovaginal/dt [Drug Therapy]"
*drug effects
female
Germany
human
microbial sensitivity test
microbiology
newborn
phase contrast microscopy
pregnancy
"Pregnancy Complications Infectious/di [Diagnosis]"
"Pregnancy Complications Infectious/dt [Drug Therapy]"
vagina discharge
"antifungal agent/ad [Drug Administration]"
"antifungal agent/dt [Drug Therapy]"

Source: EMBASE

Full Text: Available from *EBSCOhost* in *Mycoses*

96. Guideline: Vulvovaginal candidosis (AWMF 015/072), S2k (excluding chronic mucocutaneous candidosis)

Citation: Mycoses, March 2015, vol./is. 58/S1(1-15), 0933-7407;1439-0507 (01 Mar 2015)

Author(s): Mendling W.

Institution: (Mendling) Deutsches Zentrum fur Infektionen in Gynakologie und Geburtshilfe, Vogelsangstrasse 106, Wuppertal 42109, Germany

Language: English

Abstract: The oestrogenised vagina is colonised by Candida species in at least 20% of women; in late pregnancy and in immunosuppressed patients, this increases to at least 30%. In most cases, Candida albicans is involved. Host factors, particularly local defence mechanisms, gene polymorphisms, allergies, serum glucose levels, antibiotics, psycho-social stress and oestrogens influence the risk of candidal vulvovaginitis. Non-albicans species, particularly Candida glabrata, and in rare cases also Saccharomyces cerevisiae, cause less than 10% of all cases of vulvovaginitis with some regional variation; these are generally associated with milder signs and symptoms than normally seen with a C. albicans-associated vaginitis. Typical symptoms include premenstrual itching, burning, redness and odourless discharge. Although itching and redness of the introitus and vagina are typical symptoms, only 35-40% of women reporting genital itching in fact suffer from vulvovaginal candidosis. Medical history, clinical examination and microscopic examination of vaginal content using 400x optical magnification, or preferably phase contrast microscopy, are essential for diagnosis. In clinically and microscopically unclear cases and in chronically recurring cases, a fungal culture for pathogen determination should be performed. In the event of non-C. albicans species, the minimum inhibitory concentration (MIC) should also be determined. Chronic mucocutaneous candidosis, a rarer disorder which can occur in both sexes, has other causes and requires different diagnostic and treatment measures. Treatment with all antimycotic agents on the market (polyenes such as nystatin; imidazoles such as clotrimazole; and many others including ciclopirox olamine) is easy to administer in acute cases and is successful in more than 80% of cases. All vaginal preparations of polyenes, imidazoles and ciclopirox olamine and oral triazoles (fluconazole, itraconazole) are equally effective (Table); however, oral triazoles should not be administered during pregnancy according to the manufacturers. C. glabrata is not sufficiently sensitive to the usual dosages of antimycotic agents approved for gynaecological use. In other countries, vaginal suppositories of boric acid (600 mg, 1-2 times daily for 14 days) or flucytosine are recommended. Boric acid treatment is not allowed in Germany and flucytosine is not available. Eight hundred-milligram oral fluconazole per day for 2-3 weeks is therefore recommended in Germany. Due to the clinical persistence of C. glabrata despite treatment with high-dose fluconazole, oral posaconazole and, more recently, echinocandins such as micafungin are under discussion; echinocandins are very expensive, are not approved for this indication and are not supported by clinical evidence of their efficacy. In cases of vulvovaginal candidosis, resistance to C. albicans does not play a significant role in the use of polyenes or azoles. Candida krusei is resistant to the triazoles, fluconazole and itraconazole. For this reason, local imidazole, ciclopirox olamine or nystatin should be used. There are no studies to support this recommendation, however. Side effects, toxicity, embryotoxicity and allergies are not clinically significant. Vaginal treatment with clotrimazole in the first trimester of a pregnancy reduces the rate of premature births. Although it is not necessary to treat a vaginal colonisation of Candida in healthy women, vaginal administration of antimycotics is often recommended in the third trimester of pregnancy in Germany to reduce the rate of oral thrush and napkin dermatitis in healthy full-term newborns. Chronic recurrent vulvovaginal candidosis continues to be treated in intervals using suppressive therapy as long as immunological treatments are not available. The relapse rate associated with weekly or monthly oral fluconazole treatment over 6 months is approximately 50% after the conclusion of suppressive therapy according to current studies. Good results have been achieved with a fluconazole regimen using an initial 200 mg fluconazole per day on 3 days in the first week and a dosage-reduced maintenance therapy with 200 mg once a month for 1 year when the patient is free of symptoms and fungal infection (Table). Future studies should include Candida autovaccination, antibodies to Candida virulence factors and other immunological experiments. Probiotics with appropriate lactobacillus strains should also be examined in future studies on the basis of encouraging initial results. Because of the high rate of false indications, OTC treatment (self-treatment by the patient) should be discouraged.

Country of Publication: United Kingdom

Publisher: Blackwell Publishing Ltd

CAS Registry Number: 1397-89-3 (amphotericin B); 30652-87-0 (amphotericin B); 41621-49-2 (ciclopiroxolamine); 23593-75-1 (clotrimazole); 24169-02-6 (econazole); 27220-47-9 (econazole); 73151-29-8 (fenticonazole nitrate); 86386-73-4 (fluconazole); 84625-61-6 (itraconazole); 208538-73-2 (micafungin); 22832-87-7 (miconazole nitrate); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin); 171228-49-2 (posaconazole)

Publication Type: Journal: Article

Subject Headings:

antifungal resistance
article
Candida albicans
Candida glabrata
Candida parapsilosis
Candida tropicalis
dyspareunia
dysuria
estrogen blood level
fungal colonization
fungal virulence
genetic polymorphism
gynecological examination
human
immunotherapy
intravaginal drug administration
Lactobacillus
Meyerozyma guilliermondii
microscopy
nonhuman
pH measurement
phase contrast microscopy
Pichia kudriavzevii
practice guideline
pregnancy
priority journal
prophylaxis
recurrent infection
risk factor
self care
serology
systematic review
"*vagina candidiasis/di [Diagnosis]"
"*vagina candidiasis/dr [Drug Resistance]"
"*vagina candidiasis/et [Etiology]"
"*vagina candidiasis/dt [Drug Therapy]"
vagina discharge
vagina pain
vaginal burning sensation
vaginal pruritus
amphotericin B
"ciclopiroxolamine/dt [Drug Therapy]"
"clotrimazole/dt [Drug Therapy]"
"econazole/dt [Drug Therapy]"
"estrogen/ec [Endogenous Compound]"
"fenticonazole nitrate/dt [Drug Therapy]"
"fluconazole/dt [Drug Therapy]"
imidazole derivative
itraconazole
mannoprotein
micafungin
"miconazole nitrate/dt [Drug Therapy]"

nystatin
oral contraceptive agent
"polyene/dt [Drug Therapy]"
posaconazole
"pyrrole derivative/dt [Drug Therapy]"
siderophore
"skin cream/dt [Drug Therapy]"
"triazole derivative/dt [Drug Therapy]"
virulence factor

Source: EMBASE

Full Text: Available from *EBSCOhost* in *Mycoses*

97. Boric acid destabilizes the hyphal cytoskeleton and inhibits invasive growth of Candida albicans

Citation: Yeast, April 2015, vol./is. 32/4(389-398), 0749-503X;1097-0061 (01 Apr 2015)

Author(s): Pointer B.R.; Boyer M.P.; Schmidt M.

Institution: (Pointer, Boyer, Schmidt) Department of Biochemistry and Nutrition, Des Moines University, United States

Language: English

Abstract: Exposure of Candida albicans to sub-lethal concentrations of boric acid (BA) restricts the dimorphic fungus to its yeast morphology and prevents the formation of invasive hyphae on solid substrates. Exposure to BA causes a rapid and reversible disappearance of polarisome and Spitzenkorper in growing hyphae. In BA-treated hyphae of C. albicans, actin quickly reorganizes from cytoplasmic cables to cortical patches and cell wall growth switches from an apical to an isotropic pattern. As a result of the cytoskeletal changes, the hyphal tips broaden and directional growth of hyphae ceases in the presence of BA. An analysis of homozygous deletion strains showed that mutants with constitutive or enhanced hyphal growth (tup1, nrg1, ssn6, rbf1) are BA-sensitive, demonstrating that cellular morphology is a major determinant of BA tolerance. The screening of deletion mutants also showed that deficiencies of the main activator of hyphal gene expression, Efg1, and the Rim101-signalling cascade, leading to Efg1 activation, cause BA resistance. Taken together, the data presented show that the selective inhibitory effect on BA on C. albicans hyphae is rooted in a disruption of apical cytoskeletal elements of growing hyphae.

Country of Publication: United Kingdom

Publisher: John Wiley and Sons Ltd (Southern Gate, Chichester, West Sussex PO19 8SQ, United Kingdom)

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid)

Publication Type: Journal: Article

Subject Headings:
acid tolerance
*actin filament
article
*Candida albicans
cell structure
deletion mutant
EFG1 gene
fluorescence microscopy
*fungus growth
*fungus hyphae
gene
gene activation
gene disruption
gene expression
nonhuman
priority journal

signal transduction
*boric acid

Source: EMBASE

98. BASIC study: Is intravaginal boric acid non-inferior to metronidazole in symptomatic bacterial vaginosis? Study protocol for a randomized controlled trial

Citation: Trials, July 2015, vol./is. 16/1(no pagination), 1745-6215 (July 26, 2015)

Author(s): Zeron Mullins M.; Trouton K.M.

Institution: (Zeron Mullins, Trouton) University of British Columbia, Department of Family Practice, 3rd Floor David Strangway Building, 5950 Uni. Boulevard, Vancouver, BC V6T 1Z3, Canada

Language: English

Abstract: Background: Bacterial vaginosis is associated with increased transmission of sexually transmitted infections, preterm labor, post-surgical infections, and endometritis. Current treatment for symptomatic bacterial vaginosis includes antibiotics, such as metronidazole, which are 70-80 % effective at one month after treatment and result in high recurrence rates and secondary candida infections. Intravaginal boric acid has been used for over a hundred years to treat vaginal infections, such as bacterial vaginosis. Boric acid is inexpensive, accessible, and has shown to be an effective treatment for other infections, such as vaginal candidiasis. To date, there has been no clinical trial evaluation of boric acid effectiveness to treat bacterial vaginosis. Methods/Design: The BASIC (Boric Acid, Alternate Solution for Intravaginal Colonization) trial is a randomized, double-blinded, multicenter study. The study will enroll a minimum of 240 women of 16-50 years of age who are symptomatic with bacterial vaginosis. Eligible participants will have Amsel and Nugent scores confirming bacterial vaginosis. Women who are pregnant or menopausal or have other active co-infections will be excluded. Consenting participants who meet exclusion and inclusion criteria will be randomly assigned to one of three treatment groups: boric acid, metronidazole, or an inert placebo. Self-administration of treatment intravaginally for 10 days will be followed by clinical assessment at 7 and 30 days (days 17 and 40, respectively) after the end of the treatment phase. Primary outcome is a non-inferiority, per-protocol comparison of the effectiveness of boric acid with that of metronidazole at day 17, as measured by the Nugent score in 16-50 year olds. Secondary outcomes include: non-inferiority, intention-to-treat comparison of effectiveness of boric acid with that of metronidazole at day 17, analysis for both per-protocol and intention-to-treat at day 40, and safety considerations, including adverse effects requiring patient discontinuation of treatment. Discussion: This study will be the first to determine whether intravaginal boric acid is non-inferior to metronidazole in the treatment of bacterial vaginosis in symptomatic women. Trial registration: ClinicalTrials.gov NCT00799214 , registered online Nov 10, 2008.

Country of Publication: United Kingdom

Publisher: BioMed Central Ltd.

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 39322-38-8 (metronidazole); 443-48-1 (metronidazole)

Publication Type: Journal: Article

Subject Headings:
adolescent
adult
age distribution
Amsel score
article
clinical assessment
controlled study
double blind procedure
drug safety
drug self administration
drug withdrawal

female
follow up
human
informed consent
intention to treat analysis
major clinical study
menopause
mixed infection
multicenter study
Nugent Score
pregnant woman
randomized controlled trial
scoring system
symptomatology
treatment outcome
"unspecified side effect/si [Side Effect]"
"*vaginitis/di [Diagnosis]"
"*vaginitis/dt [Drug Therapy]"
"*boric acid/ct [Clinical Trial]"
"*boric acid/ae [Adverse Drug Reaction]"
"*boric acid/cm [Drug Comparison]"
"*boric acid/va [Intravaginal Drug Administration]"
"*boric acid/dt [Drug Therapy]"
"*metronidazole/va [Intravaginal Drug Administration]"
"*metronidazole/cm [Drug Comparison]"
"*metronidazole/dt [Drug Therapy]"
placebo

Source: EMBASE

Full Text: Available from *BioMed Central* in *Trials*
Available from *National Library of Medicine* in *Trials*

99. An Alternative Approach to Assess the Habitat Selection of Folsomia candida in Contaminated Soils

Citation: Bulletin of environmental contamination and toxicology, November 2015, vol./is. 95/5(670-674), 1432-0800 (01 Nov 2015)

Author(s): Bori J.; Riva M.C.

Institution: (Bori) Center for Research and Innovation in Toxicology (CRIT-Innotex Center), Technical University of Catalonia (UPC), Ctra. Nac. 150 km 15, 08227, Terrassa, Barcelona, Spain.; (Riva) Center for Research and Innovation in Toxicology (CRIT-Innotex Center), Technical University of Catalonia (UPC), Ctra. Nac. 150 km 15, 08227, Terrassa, Barcelona, Spain

Language: English

Abstract: Avoidance tests with collembolans provide a quick assessment of soil quality. However, some parameters of the procedure can be modified in order to increase its performance. In this study we assessed the tendency of Folsomia candida to avoid soils contaminated with boric acid [350-700-1400-2800-5600 mg/kg soil dry weight (dw)], phenmedipham (35-70-140-280 mg/kg dw) or petroleum hydrocarbons (1312-1838-2625-3675-5250 mg/kg dw) by preferring an untreated soil. Two separate methodologies were applied, the one presented in the ISO standard 17512:2 and a modified version of the Petri dish method that allowed data acquisition after 2, 24 and 48 h of exposure. After combining data from three separate trials, effective median concentration values (EC50) from the presented method were lower and showed similar or less variability than those from the ISO procedure, suggesting the modified protocol as a suitable alternative screening tool.

Country of Publication: United States

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 8002-05-9 (petroleum); 13684-63-4 (phenmedipham)

Publication Type: Journal: Article

Subject Headings:
analysis
animal
arthropod
*chemistry
*drug effects
*ecosystem
environmental monitoring
*growth development and aging
oil spill
*procedures
soil
soil pollutant
Spain
standards
"boric acid/an [Drug Analysis]"
"carbamic acid derivative/an [Drug Analysis]"
"petroleum/an [Drug Analysis]"
phenmedipham

Source: EMBASE

100. Non-albicans Candida Vulvovaginitis: Treatment Experience at a Tertiary Care Vaginitis Center

Citation: Journal of Lower Genital Tract Disease, January 2016, vol./is. 20/1(85-89), 1089-2591;1526-0976 (01 Jan 2016)

Author(s): Powell A.M.; Gracely E.; Nyirjesy P.

Institution: (Powell, Nyirjesy) Drexel University College of Medicine, Department of Obstetrics and Gynecology, 245 N 15th St MS 495, Philadelphia, PA 19102, United States; (Gracely) Drexel University College of Medicine, Department of Family, Community and Preventive Medicine, United States; (Gracely) Department of Epidemiology and Biostatistics, Drexel School of Public Health, Philadelphia, PA, United States

Language: English

Abstract: Objectives The aims of this study are to analyze a cohort of women with vulvovaginal symptoms and positive cultures for non-albicans Candida (NAC) to determine whether yeast was responsible for their symptoms and to evaluate the mycological effectiveness of various regimens. Methods This observational study was performed from retrospective chart review of patients with positive NAC cultures between April 1, 2008, and January 31, 2011, at a tertiary care vaginitis center. Patient intake demographics were entered into a database. Follow-up visits were analyzed for data about patient treatments and outcomes. Patients were considered a clinical cure if their symptoms were significantly improved and mycologic cure (MC) if later yeast cultures were negative. If clinical symptoms improved at the same time as MC, the isolate was considered the proximate cause for the symptoms. Results One hundred eight patients meeting entry criteria were analyzed. Boric acid was effective at obtaining MC in 32 (78%) of 41 patients with C. glabrata, 3 of 3 patients with C. tropicalis, and 3 of 3 patients with C. lusitaniae. Fluconazole was effective as initial treatment for 3 (60%) of 5 patients with C. glabrata and 13 (81%) of 16 patients with C. parapsilosis. In 52.7% of C. glabrata, 66.7% of C. parapsilosis, and 57.1% of C. tropicalis cases, effective antifungal therapy led to symptom improvement. Conclusions In a tertiary care vaginitis center, NAC, when isolated on culture, caused clinically significant infections in approximately half of symptomatic patients. A majority of infections can be effectively treated with boric acid or fluconazole regardless of the non-albicans Candida species.

Country of Publication: United States

Publisher: Lippincott Williams and Wilkins

CAS Registry Number: 1397-89-3 (amphotericin B); 30652-87-0 (amphotericin B); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 189768-38-5 (caspofungin); 86386-73-4 (fluconazole); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin)

Publication Type: Journal: Article

Subject Headings:
adult
article
"atrophic vaginitis/dt [Drug Therapy]"
*Candida glabrata
*Candida parapsilosis
*Candida tropicalis
*Clavispora lusitaniae
drug efficacy
drug treatment failure
female
human
maintenance therapy
major clinical study
microbiological examination
middle aged
observational study
retrospective study
tertiary health care
"vulvodynia/dt [Drug Therapy]"
"*vulvovaginitis/dt [Drug Therapy]"
"amphotericin B/va [Intravaginal Drug Administration]"
"*boric acid/dt [Drug Therapy]"
"*boric acid/po [Oral Drug Administration]"
"*boric acid/pd [Pharmacology]"
caspofungin
"*fluconazole/dt [Drug Therapy]"
"*fluconazole/pd [Pharmacology]"
nystatin

Source: EMBASE

101. Influence of boric acid on strains of the genus Candida [Polyglot] Vliv kyseliny borite na druhy rodu Candida

Original Title: Vliv kyseliny borite na druhy rodu Candida

Citation: Ceskoslovenska gynekologie, 1949, vol./is. 14/2(97-100), 0374-6852 (1949)

Author(s): KOCKOVA-KRATOCHVILOVA A.

Language: Polyglot

Publication Type: Journal: Article

Subject Headings:
article
*candidiasis
*boron derivative

Source: EMBASE

102. Diaper dermatitis: Current concepts

Citation: Pediatrics, 1980, vol./is. 66/4(532-536), 0031-4005 (1980)

Author(s): Weston W.L.; Lane A.T.; Weston J.A.

Institution: (Weston, Lane, Weston) Dept. Dermatol., Univ. Colorado Hlth Sci. Cent., Denver, Colo. 80262 United States

Language: English

Abstract: Diaper dermatitis may result from prolonged skin contact with wetness and bacteria. Ammonia plays no apparent role in the generation of diaper dermatitis. Candida albicans frequently contaminates a diaper dermatitis and should be considered present in any diaper dermatitis known to be present for longer than three days. Topical fluorinated

glucocorticosteroids, boric acid, and mercury-containing preparations should be avoided in the diaper area because of their toxicity.

Country of Publication: United States

Publication Type: Journal: Article

Subject Headings:
article
*Candida albicans
*dermatitis
*diaper
drug therapy
therapy
topical drug administration
*methylbenzethonium
unclassified drug

Source: EMBASE

103. The boric acid powder treatment of vulvovaginal candidiasis

Citation: Journal of the American College Health Association, 1981, vol./is. 30/3(107-109) (1981)

Author(s): Keller van Slyke K.; Pender Michel V.; Rein M.F.

Institution: (Keller van Slyke, Pender Michel, Rein) Dept. Gynecol., Student Hlth Serv., Univ. Virginia, Charlottesville, VA 22908 United States

Language: English

Country of Publication: United States

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid)

Publication Type: Journal: Article

Subject Headings:
*Candida albicans
female genital system
fungus
therapy
topical drug administration
*vagina
*vulva
*boric acid

Source: EMBASE

104. Treatment of vulvovaginal candidiasis with boric acid powder

Citation: American Journal of Obstetrics and Gynecology, 1981, vol./is. 141/2(145-148), 0002-9378 (1981)

Author(s): Van Slyke K.K.; Michel V.P.; Rein M.F.

Institution: (Van Slyke, Michel, Rein) Div. Infect. Dis., Univ. Virginia Sch. Med., Charlottesville, VA 22908 United States

Language: English

Abstract: A double-blind comparison was made of the use of 14 daily intravaginal gelatin capsules containing 600 mg of boric acid powder versus the use of identical capsules containing 100,000 U nystatin diluted to volume with cornstarch for the treatment of vulvovaginal candidiasis albicans. Cure rates for boric acid were 92% at 7 to 10 days after treatment and 72% at 30 days, whereas the nystatin cure rates were 64% at 7 to 10 days and 50% at 30 days. The speed of alleviation of signs and symptoms was similar for the two drugs. There were no untoward side effects, and cervical cytologic features were not affected. In vitro studies found boric acid to be fungistatic and its effectiveness to be unrelated to pH. Blood boron analyses indicated little absorption from the vagina and a half-life of less than 12 hours. Acceptance by the patients was better than for 'messy' vaginal creams, and

self-made capsules containg boric acid powder are inexpensive (31 cents for 14) compared with the costly medication commonly prescribed.

Country of Publication: United States

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin)

Publication Type: Journal: Article

Subject Headings:
*Candida albicans
*candidiasis
controlled study
double blind procedure
female genital system
fungus
*Gardnerella vaginalis
intratumoral drug administration
intravaginal drug administration
major clinical study
powder
therapy
*Trichomonas vaginalis
*vulvovaginitis
*boric acid
borofax
*nystatin
unclassified drug

Source: EMBASE

105. Current therapy of vulvovaginitis

Citation: Sexually transmitted diseases, October 1981, vol./is. 8/4 suppl(316-320), 0148-5717 (1981 Oct-Dec)

Author(s): Rein M.F.

Language: English

Abstract: Trichomoniasis is reliably treated with a single 2-g dose of metronidazole; however, with this regimen simultaneous treatment of sexual partners is particularly important. Trichomoniasis in pregnant women, who should not receive metronidazole, might be treated initially with clotrimazole vaginal suppositories, which appear to cure about 50% of cases. Topical antifungal agents of the imidazole class are superior to polyenes in treating vulvovaginal candidiasis. Boric acid powder applied intravaginally in gelatin capsules for 14 days appears as effective as imidazoles. Nonspecific vaginitis is now recognized as involving infection with anaerobic bacteria of the vaginal flora as well as Gardnerella vaginalis. The condition is most successfully treated with a seven-day course of metronidazole, which probably acts by eradicating the anaerobes. In addition, metabolites of metronidazole may act directly on G. vaginalis. Sulfanilamide-aminacrine-allantoin preparations are much less effective than specific therapies and have no role in the treatment of vulvovaginitis.

Country of Publication: United States

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 23593-75-1 (clotrimazole); 39322-38-8 (metronidazole); 443-48-1 (metronidazole)

Publication Type: Journal: Article

Subject Headings:
article
"bacterial infection/dt [Drug Therapy]"
"*candidiasis/dt [Drug Therapy]"
female
human

male
pregnancy
"*Trichomonas vaginalis/dt [Drug Therapy]"
"vaginitis/dt [Drug Therapy]"
"*vulvovaginitis/dt [Drug Therapy]"
"*antifungal agent/dt [Drug Therapy]"
"boric acid/dt [Drug Therapy]"
"clotrimazole/dt [Drug Therapy]"
"imidazole derivative/dt [Drug Therapy]"
"*metronidazole/dt [Drug Therapy]"

Source: EMBASE

106. The boric acid powder treatment of vulvovaginal candidiasis.

Citation: Journal of the American College Health Association, Dec 1981, vol. 30, no. 3, p. 107-109, 0002-7944 (December 1981)

Author(s): Van Slyke, K K; Michel, V P; Rein, M F

Subject Headings:
Capsules
Humans
Candidiasis
Vulvovaginitis
Index Medicus
Nystatin
Female
Boric Acids
Double-Blind Method

Source: Medline

107. Enhanced differentiation of isolates of candida albicans using a modified resistogram method

Citation: Mykosen, 1982, vol./is. 25/11(589-598), 0027-5557 (1982)

Author(s): McCreight M.C.; Warnock D.W.

Institution: (McCreight, Warnock) Dep. Microbiol., Bristol R. Infirm., Bristol BS2 8HW United Kingdom

Language: English

Abstract: The method described is based on differences in the resistance of C. albicans isolates to five chemicals (sodium selenite, boric acid, cetrimide, sodium periodate, silver nitrate) used at critical concentrations. Of 66 isolates tested on two occasions, 61 were assigned to the same strain on re-testing. Five isolates differed in their resistance to one chemical. Of the 32 potential strains that can be distinguished, 16 were found among 198 oral isolates from 22 normal subjects sampled at 1 month intervals for 12 months. Particular strains were found to persist in individual subjects and strains with identical resistograms were found in related subjects.

Country of Publication: Germany

Publication Type: Journal: Article

Subject Headings:
*Candida albicans
diagnosis
differentiation
epidemiology
fungus

Source: EMBASE

108. Nystatin versus boric acid powder in vulvovaginal candidiasis

Citation: American journal of obstetrics and gynecology, December 1982, vol./is. 144/8(992-993), 0002-9378 (15 Dec 1982)

Author(s): Orley J.

Language: English

Country of Publication: United States

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin)

Publication Type: Journal: Letter

Subject Headings: female
human
letter
powder
"*vagina candidiasis/dt [Drug Therapy]"
"*boric acid/dt [Drug Therapy]"
"*nystatin/ad [Drug Administration]"
"*nystatin/dt [Drug Therapy]"

Source: EMBASE

109. Nystatin versus boric acid powder in vulvovaginal candidiasis.

Citation: American journal of obstetrics and gynecology, Dec 1982, vol. 144, no. 8, p. 992-993, 0002-9378 (December 15, 1982)

Author(s): Orley, J

Subject Headings: Candidiasis Vulvovaginal
Humans
Powders
Index Medicus
Nystatin
Female
Boric Acids
Abridged Index Medicus

Source: Medline

110. Bacterial and chemical analysis of otitis externa during immersion in saturated solutions. Double blind test on the usefulness of prophylactic and therapeutic preparations [Italian] RILIEVI BATTERIOLOGICI E CLINICI SULL'OTITE ESTERNA IN SATURAZIONE. STUDIO A DOPPIO CIECO SULL'EFFICACIA DI PREPARATI PROFILATTICI E TERAPEUTICI

Original Title: RILIEVI BATTERIOLOGICI E CLINICI SULL'OTITE ESTERNA IN SATURAZIONE. STUDIO A DOPPIO CIECO SULL'EFFICACIA DI PREPARATI PROFILATTICI E TERAPEUTICI

Citation: Minerva Medica, 1983, vol./is. 74/35(2029-2032), 0026-4806 (1983)

Author(s): Marroni A.; Arduini R.; Conti S.

Language: Italian

Abstract: Microbiological analysis of the variation in the bacterial flora of the external auditory canal was carried out during 39 immersions in saturated solutions. A double blind test on the usefulness of prophylactic and therapeutic preparations was also carried out. Prophylactics. - 5% Al acetate in H<inf>2</inf>O (P1), Boric alcohol (P2), lactic acid in H<inf>2</inf>O (P3, Domeboro (P4), no prophylactic (P0). After the immersions, a significant increase in Pseudomonas Aeruginosa and Candida Albicans ($p < 0,01$) was noted in the auricular bacterial flora. Gram positive bacteria in general were considerably reduced ($p < 0,01$). Gram negative bacteria other than pseudomonas A ($p < 0,3$) and coagulase negative straphylococci ($p < 0,03$) did not vary significantly. Prophylactic preparations P1 and P2 were shown to be significantly more effective than P3, P4 and P0 in preventing the symptomatology ($p < 0,01$). The most effective therapeutic preparation was found to be a locally applied gentamycin-polymixin association.

Country of Publication: Italy

CAS Registry Number: 64-17-5 (alcohol); 139-12-8 (aluminum acetate); 7360-44-3 (aluminum acetate); 8006-13-1 (aluminum acetate solution); 8001-54-5 (benzalkonium); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 1392-48-9 (gentamicin); 1403-66-3 (gentamicin); 1405-41-0 (gentamicin); 50-23-7 (hydrocortisone); 113-21-3 (lactic acid); 50-21-5 (lactic acid); 11004-65-2 (neomycin); 1404-04-2 (neomycin); 1405-10-3 (neomycin); 8026-22-0 (neomycin); 11081-39-3 (polymyxin); 1406-11-7 (polymyxin); 52580-78-6 (polymyxin); 1404-26-8 (polymyxin B); 1405-20-5 (polymyxin B); 8012-89-3 (propolis)

Publication Type: Journal: Article

Subject Headings:
auditory system
*Candida
Candida albicans
clinical article
*drug efficacy
*drug sensitivity
*external otitis
fungus
human
prevention
*prophylaxis
*Pseudomonas
Pseudomonas aeruginosa
*Staphylococcus
*therapy
*alcohol
*aluminum acetate
*aluminum acetate solution
*benzalkonium
*boric acid
*gentamicin
*hydrocortisone
*lactic acid
*neomycin
polymyxin
*polymyxin B
*propolis

Source: EMBASE

111. [Bacteriological and clinical notes on otitis externa in saturation. Double-blind study on the efficacy of prophylactic and therapeutic preparations].

Citation: Minerva medica, Sep 1983, vol. 74, no. 35, p. 2029-2032, 0026-4806 (September 15, 1983)

Author(s): Marroni, A; Arduini, R; Conti, S

Abstract: Microbiological analysis of the variation in the bacterial flora of the external auditory canal was carried out during 39 immersion in saturated solutions. A double blind test on the usefulness of prophylactic and therapeutic preparations was also carried out. Prophylactics. - 5% Al acetate in H2O (P1), Boric alcohol (P2), lactic acid in H2O (P3, Domeboro (P4), no prophylactic (P0). After the immersions, a significant increase in Pseudomonas Aeruginosa and Candida Albicans (p less than 0,01) was noted in the auricular bacterial flora. Gram positive bacteria in general were considerably reduced (p less than 0,01). Gram negative bacteria other than pseudomonas. A (p less than 0,3) and coagulase negative straphylococci (p less than 0,03) did not vary significantly. Prophylactic preparations P1 and P2 were shown to be significantly more effective than P3, P4 and P0 in preventing the symptomatology (p less than 0,01). The most effective

therapeutic preparation was found to be a locally applied gentamycinpolymixin association.

Subject Headings:
Neomycin
Gentamicins
Candida albicans
Propolis
Benzalkonium Compounds
Humans
Otitis Externa
Clinical Trials as Topic
Hydrocortisone
Adult
Index Medicus
Pseudomonas aeruginosa
Double-Blind Method
Polymyxin B
Imidazoles
Glycerol

Source: Medline

112. A new simple method for biotyping Candida albicans

Citation: Microbios, 1987, vol./is. 51/208-209(159-167), 0026-2633 (1987)

Author(s): Williamson M.I.; Samaranayake L.P.; MacFarlane T.W.

Institution: (Williamson, Samaranayake, MacFarlane) Department of Oral Medicine and Pathology, Glasgow Dental Hospital and School, Scotland, Great Britain.

Language: English

Abstract: A simple method which allows rapid, reproducible biotyping of Candida albicans isolates, and is suitable for use in any diagnostic medical microbiology laboratory is described. This system comprises three tests, the API ZYM system, the API 20C system, and a plate test for resistance to boric acid. The system differentiated a possible 234 biotypes, of which 33 were found amongst the 130 isolates of C. albicans taken from oral, genital and skin sites. Major biotypes found amongst oral and non-oral isolates were similar, although differences were found amongst minor biotypes. The new system was found to be reproducible, discriminatory, reasonably fast (48 h), easy to perform, and had no requirement for specialised equipment. Hence this biotyping system is suitable for use in diagnostic microbiology laboratories for epidemiological investigations of C. albicans infections.

Country of Publication: United Kingdom

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid)

Publication Type: Journal: Article

Subject Headings:
antibiotic resistance
article
*Candida albicans
classification
drug effect
enzymology
human
metabolism
methodology
mycology
"boric acid/pd [Pharmacology]"

Source: EMBASE

113. A new simple method for biotyping Candida albicans.

Citation: Microbios, Jan 1987, vol. 51, no. 208-209, p. 159-167, 0026-2633 (1987)

Author(s): Williamson, M I; Samaranayake, L P; MacFarlane, T W

Abstract: A simple method which allows rapid, reproducible biotyping of Candida albicans isolates, and is suitable for use in any diagnostic medical microbiology laboratory is described. This system comprises three tests, the API ZYM system, the API 20C system, and a plate test for resistance to boric acid. The system differentiated a possible 234 biotypes, of which 33 were found amongst the 130 isolates of C. albicans taken from oral, genital and skin sites. Major biotypes found amongst oral and non-oral isolates were similar, although differences were found amongst minor biotypes. The new system was found to be reproducible, discriminatory, reasonably fast (48 h), easy to perform, and had no requirement for specialised equipment. Hence this biotyping system is suitable for use in diagnostic microbiology laboratories for epidemiological investigations of C. albicans infections.

Subject Headings: Candida albicans
Humans
Index Medicus
Boric Acids
Drug Resistance Microbial
Mycology

Source: Medline

114. Clinical evaluation of a salicylic acid/boric acid/ammonium alum combination as coadjuvants in the treatment of Trichomonas vaginalis and Candida albicans vulvovaginitis [Portuguese] AVALIACAO CLINICA DE UMA ASSOCIACAO ACIDO SALICILICO/ACIDO BORICO/ALUMEN AMONIACAL COMO COADJUVANTE NO TRATAMENTO DE VULVOVAGINITES POR TRICHOMONAS VAGINALIS E CANDIDA ALBICANS

Original Title: AVALIACAO CLINICA DE UMA ASSOCIACAO ACIDO SALICILICO/ACIDO BORICO/ALUMEN AMONIACAL COMO COADJUVANTE NO TRATAMENTO DE VULVOVAGINITES POR TRICHOMONAS VAGINALIS E CANDIDA ALBICANS

Citation: Jornal Brasileiro de Ginecologia, 1987, vol./is. 97/7(359-362), 0368-1416 (1987)

Author(s): Cabral Goncalves N.M.C.

Institution: (Cabral Goncalves) Ginecologista e Obstetra, Medica do Servico de Medicina Ocupacional da Santa Casa de Misericordia de Porto Alegre, Porto Alegre, RS Brazil

Language: Portuguese

Country of Publication: Brazil

CAS Registry Number: 493-53-8 (acetylsalicylic acid); 50-78-2 (acetylsalicylic acid); 53663-74-4 (acetylsalicylic acid); 53664-49-6 (acetylsalicylic acid); 63781-77-1 (acetylsalicylic acid); 7784-25-0 (aluminum ammonium sulfate); 7784-26-1 (aluminum ammonium sulfate); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 23593-75-1 (clotrimazole); 9001-63-2 (lysozyme); 8028-52-2 (vinegar)

Publication Type: Journal

Subject Headings: clinical article
controlled study
drug comparison
drug efficacy
drug mixture
female genital system
human
therapy
*vulvovaginitis
"*acetylsalicylic acid/cm [Drug Comparison]"
"*aluminum ammonium sulfate/cm [Drug Comparison]"
"*boric acid/cm [Drug Comparison]"

*clotrimazole
*lysozyme
*mimorazol
unclassified drug
"*vinegar/cm [Drug Comparison]"

Source: EMBASE

115. Growth inhibition of Candida albicans and other medically important yeasts by vaginal contraceptive products.

Citation: Gynecologic and obstetric investigation, Jan 1990, vol. 29, no. 1, p. 67-70, 0378-7346 (1990)

Author(s): Shubair, M; Larsen, B

Abstract: The antifungal effects of two commercially available spermicidal gels (Conceptrol, produced by Ortho Pharmaceutical, Raritan, N.J., and Koromex, produced by Schmid Laboratories, Little Falls, N.J.) as well as pure nonoxynol-9 and boric acid (both components of vaginal contraceptive products) were tested against 50 clinical yeast isolates by the agar dilution method. The formulated products exerted comparable dose-dependent inhibitory effects against all yeasts tested. A 3-fold dilution of the formulated spermicidal products inhibited 90% of the yeast strains tested. To determine if the antifungal effect was due to the spermicidal detergent nonoxynol-9, this compound was tested for antifungal activity but was completely ineffective against Candida albicans in concentrations up to 10%. Boric acid, present in at least one of the products (Koromex), inhibited representative yeasts at a concentration of 0.4%. The relationship of pH and oxygen tension to inhibition by the commercial spermicides was also investigated. The pH values tested ranged from 4 to 7 and had little effect on inhibition; anaerobiosis at pH 7 slightly reduced the inhibitory activity of Conceptrol gel.

Subject Headings: Polyethylene Glycols
Cryptococcus
Candida albicans
Humans
Spermatocidal Agents
Antifungal Agents
Index Medicus
Yeasts
Female
Nonoxynol
Boric Acids
Candida
Population

Source: Medline

116. Torulopsis glabrata vaginitis: Clinical aspects and susceptibility to antifungal agents

Citation: Obstetrics and Gynecology, 1990, vol./is. 76/4(651-655), 0029-7844 (1990)

Author(s): Redondo-Lopez V.; Lynch M.; Schmitt C.; Cook R.; Sobel J.D.

Institution: (Redondo-Lopez, Lynch, Schmitt, Cook, Sobel) Division of Infectious Diseases, Department of Medicine, Wayne State University School of Medicine, Detroit, MI United States

Language: English

Abstract: Torulopsis glabrata is second only to Candida albicans in frequency of isolation from the vagina in both asymptomatic women and patients with yeast vaginitis. We retrospectively studied 33 patients from whom vaginal isolates of T glabrata were obtained. Torulopsis glabrata caused symptomatic vaginitis in 42% of the patients but was unassociated with symptoms in 30%; in 27% of patients, its importance was uncertain because of concomitant pathology. Antifungal susceptibility testing was performed on 39 T glabrata strains isolated from 39 patients. The minimal inhibitory concentrations (MICs) of the majority of T glabrata isolates fell within the sensitive range of the antimycotic drugs

tested; however, no correlation was found between in vitro antifungal MICs and the response to azole drug therapy. Clinical success was achieved in 67% of the patients although mycologic cure occurred in only 33%. A small number of patients developed recurrent and often chronic Torulopsis vaginitis unresponsive to conventional therapy. Limited experience suggests that vaginal boric acid therapy may be of value in these recalcitrant cases.

Country of Publication: United States

CAS Registry Number: 1397-89-3 (amphotericin B); 30652-87-0 (amphotericin B); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 23593-75-1 (clotrimazole); 86386-73-4 (fluconazole); 2022-85-7 (flucytosine); 84625-61-6 (itraconazole); 65277-42-1 (ketoconazole); 22916-47-8 (miconazole); 67915-31-5 (terconazole)

Publication Type: Journal: Article

Subject Headings:
article
clinical article
controlled study
female
fungus
human
methodology
priority journal
torulopsis glabrata
"*vaginitis/dt [Drug Therapy]"
"*amphotericin B/cm [Drug Comparison]"
"*amphotericin B/do [Drug Dose]"
"*amphotericin B/dt [Drug Therapy]"
"*amphotericin B/pd [Pharmacology]"
"*boric acid/cm [Drug Comparison]"
"*boric acid/do [Drug Dose]"
"*boric acid/dt [Drug Therapy]"
"*boric acid/pd [Pharmacology]"
"*clotrimazole/cm [Drug Comparison]"
"*clotrimazole/do [Drug Dose]"
"*clotrimazole/dt [Drug Therapy]"
"*clotrimazole/pd [Pharmacology]"
"*fluconazole/cm [Drug Comparison]"
"*fluconazole/do [Drug Dose]"
"*fluconazole/dt [Drug Therapy]"
"*fluconazole/pd [Pharmacology]"
"*flucytosine/cm [Drug Comparison]"
"*flucytosine/do [Drug Dose]"
"*flucytosine/dt [Drug Therapy]"
"*flucytosine/pd [Pharmacology]"
"*itraconazole/cm [Drug Comparison]"
"*itraconazole/do [Drug Dose]"
"*itraconazole/dt [Drug Therapy]"
"*itraconazole/pd [Pharmacology]"
"*ketoconazole/cm [Drug Comparison]"
"*ketoconazole/do [Drug Dose]"
"*ketoconazole/dt [Drug Therapy]"
"*ketoconazole/pd [Pharmacology]"
"*miconazole/cm [Drug Comparison]"
"*miconazole/do [Drug Dose]"
"*miconazole/dt [Drug Therapy]"
"*miconazole/pd [Pharmacology]"
"*terconazole/cm [Drug Comparison]"
"*terconazole/do [Drug Dose]"
"*terconazole/dt [Drug Therapy]"
"*terconazole/pd [Pharmacology]"

Source: EMBASE

117. Growth inhibition of Candida albicans and other medically important yeasts by vaginal contraceptive products

Citation: Gynecologic and Obstetric Investigation, 1990, vol./is. 29/1(67-70), 0378-7346 (1990)

Author(s): Shubair M.; Larsen B.

Institution: (Shubair, Larsen) Department of Microbiology, Marshall University School of Medicine, Huntington, WV 25701 United States

Language: English

Abstract: The antifungal effects of two commercially available spermicidal gels (Conceptrol, produced by Ortho Pharmaceutical, Raritan, N.J., and Koromex, produced by Schmid Laboratories, Little Falls, N.J.) as well as pure nonoxynol-9 and boric acid (both components of vaginal contraceptive products) were tested against 50 clinical yeast isolates by the agar dilution method. The formulated products exerted comparable dose-dependent inhibitory effects against all yeasts tested. A 3-fold dilution of the formulated spermicidal products inhibited 90% of the yeast strains tested. To determine if the antifungal effect was due to the spermicidal detergent nonoxynol-9, this compound was tested for antifungal activity but was completely ineffective against Candida albicans in concentrations up to 10%. Boric acid, present in at least one of the products (Koromex), inhibited representative yeasts at a concentration of 0.4%. The relationship of pH and oxygen tension to inhibition by the commercial spermicides was also investigated. The pH values tested ranged from 4 to 7 and had little effect on inhibition; anaerobiosis at pH 7 slightly reduced the inhibitory activity of Conceptrol gel.

Country of Publication: Switzerland

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 96827-50-8 (nonoxinol 9)

Publication Type: Journal: Article

Subject Headings:
article
*Candida albicans
*drug screening
female
fungus
human
priority journal
"*boric acid/do [Drug Dose]"
"*boric acid/pd [Pharmacology]"
"*nonoxinol 9/do [Drug Dose]"
"*nonoxinol 9/pd [Pharmacology]"

Source: EMBASE

118. Antifungal agents vs. boric acid for treating chronic mycotic vulvovaginitis

Citation: Journal of Reproductive Medicine for the Obstetrician and Gynecologist, 1991, vol./is. 36/8(593-597), 0024-7758 (1991)

Author(s): Jovanovic R.; Congema E.; Nguyen H.T.

Institution: (Jovanovic, Congema, Nguyen) 895 Park Avenue, New York, NY 10021, United States

Language: English

Abstract: Ninety-two women with chronic mycotic vaginal infections were followed with microscopic examination of the vaginal discharge during prolonged therapy with anti-fungal agents and boric acid. A microscopic picture unique to chronic mycotic vaginitis was observed, representing the cytologic reaction of the mucous membrane to chronic yeast infection. This diagnostic tool proved extremely effective in detecting both symptomatic and residual, subclinical mycotic infection and provided a highly predictive measure of the probability of relapse. The ineffectiveness of conventional antifungal

agents appeared to be the main reason for chronic mycotic infections. In contrast, boric acid was effective in curing 98% of the patients who had previously failed to respond to the most commonly used antifungal agents and was clearly indicated as the treatment of choice for prophylaxis.

Country of Publication: United States

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 64872-76-0 (butoconazole); 64872-77-1 (butoconazole); 23593-75-1 (clotrimazole); 467-63-0 (crystal violet); 548-62-9 (crystal violet); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin)

Publication Type: Journal: Article

Subject Headings:
article
*candidiasis
female
human
major clinical study
oral drug administration
priority journal
topical drug administration
*vulvovaginitis
*antifungal agent
"*boric acid/cm [Drug Comparison]"
"*boric acid/dt [Drug Therapy]"
"*butoconazole/cm [Drug Comparison]"
"*butoconazole/dt [Drug Therapy]"
"*clotrimazole/cm [Drug Comparison]"
"*clotrimazole/dt [Drug Therapy]"
"*crystal violet/dt [Drug Therapy]"
"*nystatin/cm [Drug Comparison]"
"*nystatin/dt [Drug Therapy]"

Source: EMBASE

119. Antifungal agents vs. boric acid for treating chronic mycotic vulvovaginitis.

Citation: The Journal of reproductive medicine, Aug 1991, vol. 36, no. 8, p. 593-597, 0024-7758 (August 1991)

Author(s): Jovanovic, R; Congema, E; Nguyen, H T

Abstract: Ninety-two women with chronic mycotic vaginal infections were followed with microscopic examination of the vaginal discharge during prolonged therapy with antifungal agents and boric acid. A microscopic picture unique to chronic mycotic vaginitis was observed, representing the cytologic reaction of the mucous membrane to chronic yeast infection. This diagnostic tool proved extremely effective in detecting both symptomatic and residual, subclinical mycotic infection and provided a highly predictive measure of the probability of relapse. The ineffectiveness of conventional antifungal agents appeared to be the main reason for chronic mycotic infections. In contrast, boric acid was effective in curing 98% of the patients who had previously failed to respond to the most commonly used antifungal agents and was clearly indicated as the treatment of choice for prophylaxis.

Subject Headings:
Administration Intravaginal
Humans
Candidiasis Vulvovaginal
Antifungal Agents
Predictive Value of Tests
Index Medicus
Recurrence
Adult
Female
Vaginal Smears

Boric Acids
Chronic Disease

Source: Medline

120. Boric acid vaginal suppositories

Citation: Annals of Pharmacotherapy, 1993, vol./is. 27/11(1355-1357), 1060-0280 (1993)

Author(s): Thai L.; Hart L.L.

Institution: (Thai, Hart) Division of Clinical Pharmacy, School of Pharmacy, University of California, San Francisco, CA 94143, United States

Language: English

Country of Publication: United States

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 64872-76-0 (butoconazole); 64872-77-1 (butoconazole); 23593-75-1 (clotrimazole); 467-63-0 (crystal violet); 548-62-9 (crystal violet); 22832-87-7 (miconazole nitrate); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin)

Publication Type: Journal: Note

Subject Headings:
antifungal activity
Candida albicans
drug efficacy
drug safety
female
human
intravaginal drug administration
note
oral drug administration
pharmaceutics
priority journal
"rash/dt [Drug Therapy]"
*suppository
symptomatology
teratogenesis
topical drug administration
"*vagina candidiasis/dt [Drug Therapy]"
"*vagina candidiasis/pc [Prevention]"
"vagina discharge/si [Side Effect]"
"*boric acid/ae [Adverse Drug Reaction]"
"*boric acid/ad [Drug Administration]"
"*boric acid/cm [Drug Comparison]"
"*boric acid/dt [Drug Therapy]"
"*boric acid/pr [Pharmaceutics]"
"butoconazole/cm [Drug Comparison]"
"butoconazole/dt [Drug Therapy]"
"clotrimazole/cm [Drug Comparison]"
"clotrimazole/dt [Drug Therapy]"
"crystal violet/cm [Drug Comparison]"
"crystal violet/dt [Drug Therapy]"
"miconazole nitrate/cm [Drug Comparison]"
"miconazole nitrate/dt [Drug Therapy]"
"nystatin/cm [Drug Comparison]"
"nystatin/dt [Drug Therapy]"

Source: EMBASE

121. Management of persistent vulvo vaginal candidosis due to azole-resistant Candida glabrata

Citation: Genitourinary Medicine, 1993, vol./is. 69/2(112-114), 0266-4348 (1993)

Author(s): White D.J.; Johnson E.M.; Warnock D.W.

Institution: (White, Johnson, Warnock) Department of Genitourinary Medicine, The General Hospital, Steelhouse Lane, Birmingham B4 6NH, United Kingdom

Language: English

Abstract: Subjects - Three cases are described of long-standing vaginal candidosis due to Candida glabrata. These had failed to respond to local and systemic antifungals. In each case the infecting strain appeared resistant to a range of azole drugs in vitro. Clinical course: Case one - This patient recovered following prolonged treatment with oral itraconazole in combination with oral and vaginal nystatin. Case two - Yeasts were eradicated from this patient following cyclical treatment with oral dydrogesterone; prolonged vaginal treatment with nystatin may have helped. Case three - This patient did not respond to prolonged course of oral itraconazole in combination with vaginal and oral nystatin, oral medroxyprogesterone or intravaginal boric acid. Eradication of C. glabrata was finally achieved by local application of 1% gentian violet. Shortly after eradication of the C. glabrata infection, both Case two and Case three developed infections with other Candida species responsive to azole antifungals.

Country of Publication: United Kingdom

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 467-63-0 (crystal violet); 548-62-9 (crystal violet); 152-62-5 (dydrogesterone); 24169-02-6 (econazole); 27220-47-9 (econazole); 86386-73-4 (fluconazole); 2022-85-7 (flucytosine); 84625-61-6 (itraconazole); 65277-42-1 (ketoconazole); 520-85-4 (medroxyprogesterone); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin)

Publication Type: Journal: Article

Subject Headings:
adult
article
Candida glabrata
case report
controlled study
drug sensitivity
female
human
"infection/di [Diagnosis]"
"infection/dt [Drug Therapy]"
intravaginal drug administration
oral drug administration
priority journal
"*vagina disease/di [Diagnosis]"
"*vagina disease/dt [Drug Therapy]"
"*boric acid/dt [Drug Therapy]"
*crystal violet
"*dydrogesterone/dt [Drug Therapy]"
"econazole/dt [Drug Therapy]"
"fluconazole/dt [Drug Therapy]"
"flucytosine/dt [Drug Therapy]"
"*itraconazole/cb [Drug Combination]"
"*itraconazole/do [Drug Dose]"
"*itraconazole/dt [Drug Therapy]"
"ketoconazole/dt [Drug Therapy]"
"*medroxyprogesterone/dt [Drug Therapy]"
"*nystatin/cb [Drug Combination]"
"*nystatin/do [Drug Dose]"
"*nystatin/dt [Drug Therapy]"

Source: EMBASE

122. Current treatment of vulvovaginal candidosis [Serbian] DANASNJE LIJECENJE VULVOVAGINALNE KANDIDOZE

Original Title: DANASNJE LIJECENJE VULVOVAGINALNE KANDIDOZE

Citation: Gynaecologia et Perinatologia, 1994, vol./is. 3/4(153-155), 1330-0091 (1994)

Author(s): Tomljanovic M.

Institution: (Tomljanovic) Tomislavova 1, 44000 Sisak, Croatia

Language: Serbian

Abstract: Vulvovaginal candidiasis (WC) is considered to be a 'Crux medici et patientorum' for the following reasons: its great dissemination, frequent recurrences and great number of predisposing factors. Prerequisite for the effective therapy is a proper diagnosis, which includes obvious clinical picture and the evidence of yeasts in the native preparation and/or cultivation of vaginal secretion. The treatment of WC can include: 1. Polyene macrolides, 2. Imidazoles, 3. Triazoles, 4. Pyrrimidines, 5. Boric acid, 6. Water-solution of Gentian violet, 7. Immunocorrectors (antihistamines, H<inf>2</inf>-receptor antagonists, prostaglandin synthesis inhibitors and chromolyn), 8. Adherence inhibitors (pepstatin A), 9. Hygienic and dietary measures. Among women with first or rare episode of WC, as in those with fastly repeated VVC, therapy is curative, that is, clinical and microbiological cure. Among women with chronic WC, therapy is suppressive, i.e. only the relief of subjective troubles. During treatment of VVC mistakes are rather frequent in routine gynaecologic practice.

Country of Publication: Croatia

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 23593-75-1 (clotrimazole); 15826-37-6 (cromoglycate disodium); 16110-51-3 (cromoglycate disodium); 93356-79-7 (cromoglycate disodium); 93356-84-4 (cromoglycate disodium); 467-63-0 (crystal violet); 548-62-9 (crystal violet); 24169-02-6 (econazole); 27220-47-9 (econazole); 86386-73-4 (fluconazole); 2022-85-7 (flucytosine); 84625-61-6 (itraconazole); 65277-42-1 (ketoconazole); 22916-47-8 (miconazole); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin); 26305-03-3 (pepstatin); 39324-30-6 (pepstatin); 67915-31-5 (terconazole)

Publication Type: Journal: Short Survey

Subject Headings:
"*candidiasis/dt [Drug Therapy]"
female
human
hygiene
short survey
"*vulvovaginitis/dt [Drug Therapy]"
yeast
"*antifungal agent/dt [Drug Therapy]"
"antihistaminic agent/dt [Drug Therapy]"
"boric acid/dt [Drug Therapy]"
"clotrimazole/dt [Drug Therapy]"
"cromoglycate disodium/dt [Drug Therapy]"
"crystal violet/dt [Drug Therapy]"
"econazole/dt [Drug Therapy]"
"fluconazole/dt [Drug Therapy]"
"flucytosine/dt [Drug Therapy]"
"imidazole derivative/dt [Drug Therapy]"
"immunomodulating agent/dt [Drug Therapy]"
"itraconazole/dt [Drug Therapy]"
"ketoconazole/dt [Drug Therapy]"
"miconazole/dt [Drug Therapy]"
"nystatin/dt [Drug Therapy]"
"pepstatin/dt [Drug Therapy]"
"polyene/dt [Drug Therapy]"
"prostaglandin synthesis inhibitor/dt [Drug Therapy]"

"terconazole/dt [Drug Therapy]"
"triazole derivative/dt [Drug Therapy]"
unclassified drug

Source: EMBASE

123. Current treatment of vulvovaginal candidosis [Serbian] DANASNJE LIJECENJE VULVOVAGINALNE KANDIDOZE

Original Title: DANASNJE LIJECENJE VULVOVAGINALNE KANDIDOZE

Citation: Gynaecologia et Perinatologia, 1994, vol./is. 3/3(153-155), 1330-0091 (1994)

Author(s): Tomljanovic M.

Institution: (Tomljanovic) Tomislavova 1, 44000 Sisak, Croatia

Language: Serbian

Abstract: Vulvovaginal candidiasis (VVC) is considered to be a 'Crux medici et patientorum' for the following reasons: its great dissemination, frequent recurrences and great number of predisposing factors. Prerequisite for the effective therapy is a proper diagnosis, which includes obvious clinical picture and the evidence of yeasts in the native preparation and/or cultivation of vaginal secretion. The treatment of VVC can include: 1. Polyene macrolides, 2. Imidazoles, 3. Triazoles, 4. Pyrrimidines, 5. Boric acid, 6. Water-solution of Gentian violet, 7. Immunocorrectors (antihistamines, H<inf>2</inf>-receptor antagonists, prostaglandin synthesis inhibitors and chromolyn), 8. Adherence inhibitors (pepstatin A), 9. Hygienic and dietary measures. Among women with first or rare episode of VVC, as in those with fastly repeated VVC, therapy is curative, that is, clinical and microbiological cure. Among women with chronic VVC, therapy is supressive, i.e. only the relief of subjective troubles. During treatment of VVC mistakes are rather frequent in routine gynaecologic practice.

Country of Publication: Croatia

CAS Registry Number: 1397-89-3 (amphotericin B); 30652-87-0 (amphotericin B); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 23593-75-1 (clotrimazole); 15826-37-6 (cromoglycate disodium); 16110-51-3 (cromoglycate disodium); 93356-79-7 (cromoglycate disodium); 93356-84-4 (cromoglycate disodium); 467-63-0 (crystal violet); 548-62-9 (crystal violet); 86386-73-4 (fluconazole); 2022-85-7 (flucytosine); 84625-61-6 (itraconazole); 65277-42-1 (ketoconazole); 22916-47-8 (miconazole); 52882-37-8 (natamycin); 7681-93-8 (natamycin); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin); 67915-31-5 (terconazole)

Publication Type: Journal: Short Survey

Subject Headings:
clinical feature
female
human
oral drug administration
short survey
topical drug administration
"*vagina candidiasis/di [Diagnosis]"
"*vagina candidiasis/dt [Drug Therapy]"
"*vulvovaginitis/di [Diagnosis]"
"*vulvovaginitis/dt [Drug Therapy]"
"amphotericin B/dt [Drug Therapy]"
"*antifungal agent/dt [Drug Therapy]"
"antihistaminic agent/dt [Drug Therapy]"
"*boric acid/dt [Drug Therapy]"
"clotrimazole/dt [Drug Therapy]"
"cromoglycate disodium/dt [Drug Therapy]"
"crystal violet/dt [Drug Therapy]"
"fluconazole/dt [Drug Therapy]"
"flucytosine/dt [Drug Therapy]"
"imidazole derivative/dt [Drug Therapy]"

"*immunomodulating agent/dt [Drug Therapy]"
"itraconazole/dt [Drug Therapy]"
"ketoconazole/dt [Drug Therapy]"
"miconazole/dt [Drug Therapy]"
"natamycin/dt [Drug Therapy]"
"nystatin/dt [Drug Therapy]"
"prostaglandin synthesis inhibitor/dt [Drug Therapy]"
"pyrimidine derivative/dt [Drug Therapy]"
"terconazole/dt [Drug Therapy]"
"triazole derivative/dt [Drug Therapy]"
unclassified drug

Source: EMBASE

124. Physiological traits associated with success of Candida albicans strains as commensal colonizers and pathogens

Citation: Journal of Clinical Microbiology, 1995, vol./is. 33/11(2920-2926), 0095-1137 (1995)

Author(s): Schmid J.; Hunter P.R.; White G.C.; Nand A.K.; Cannon R.D.

Institution: (Schmid, Hunter, White, Nand, Cannon) Department of Microbiology/Genetics, School of Biological Sciences, Massey University, Palmerston North, New Zealand

Language: English

Abstract: DNA fingerprinting with the moderately repetitive sequence Ca3 has repeatedly identified groups of genetically similar strains of Candida albicans that are more frequently isolated than other groups of strains from human hosts in a geographical locale. Members of these groups are found in approximately 30% of healthy individuals and in up to 70% of patients suffering from candidiasis. The high prevalence of these strains implies that they are more successful in colonizing human hosts and in causing disease than other strains (J. Schmid, Clin. Adv. Treatment Fungal Infect. 4(6):12- 16, 1993). In the present study, we have compared one such group of highly prevalent strains with other strains from the same locale to identify physiological traits associated with its success. We found that members of the group of highly prevalent strains were resistant to a larger number of chemicals than other strains in a resistogram assay. When resistance to individual chemicals used in the resistogram assay was analyzed, strains from the group of highly prevalent strains were significantly more often resistant to boric acid, cetrimide, chlorhexidine, 5-fluorocytosine, and high sodium chloride concentrations than other strains. Strains from the group of highly prevalent strains also adhered significantly (1.5 times) better to saliva- coated surfaces than did other strains. Because members of highly prevalent groups of strains are the most common infectious agents in candidiasis, these physiological traits may be involved in determining not only the success of C. albicans in colonizing human hosts in general but also its ability to cause disease. Sodium chloride resistance and increased adherence were also associated with infectious isolates outside the group of highly prevalent strains, indicating that they may be of particular importance in pathogenesis.

Country of Publication: United States

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 57-09-0 (cetrimide); 6899-10-1 (cetrimide); 8044-71-1 (cetrimide); 3697-42-5 (chlorhexidine); 55-56-1 (chlorhexidine); 2022-85-7 (flucytosine); 7647-14-5 (sodium chloride)

Publication Type: Journal: Article

Subject Headings:
article
bacterial colonization
bacterium adherence
*Candida albicans
"*candidiasis/di [Diagnosis]"
"*candidiasis/ep [Epidemiology]"
"*candidiasis/et [Etiology]"
DNA fingerprinting
fungal genetics

*host parasite interaction
nonhuman
pathogenesis
prevalence
priority journal
boric acid
cetrimide
chlorhexidine
flucytosine
*fungal DNA
sodium chloride

Source: EMBASE

Full Text: Available from *National Library of Medicine* in *Journal of Clinical Microbiology*

125. Discrimination of strains of Candida albicans isolated from deep and superficial sites by resistotyping.

Citation: Mycoses, Jan 1995, vol. 38, no. 1-2, p. 37-40, 0933-7407 (1995 Jan-Feb)

Author(s): Hunter, P R

Abstract: Resistotyping was used to characterise 106 strains of Candida albicans classified as to whether they came from deep or superficial infections. The data were analysed by logistic regression analysis. There was a statistically significant difference between the two groups of strains. After removal of variables by the log-likelihood method four resistotyping agents were found to predict source of strain: boric acid, benzalkonium chloride, malachite green and mercurochrome. Whilst there were phenotypic differences between strains isolated from deep and superficial sites it is not clear whether this strain represents different strain types or strain histories.

Subject Headings: Drug Resistance Microbial
Mycological Typing Techniques
Index Medicus
Candida albicans

Source: Medline

126. Discrimination of strains of Candida albicans isolated from deep and superficial sites by resistotyping

Citation: Mycoses, 1995, vol./is. 38/1-2(37-40), 0933-7407 (1995)

Author(s): Hunter P.R.

Institution: (Hunter) Public Health Laboratory, Countess of Chester Health Park, Liverpool Road, Chester CH2 1UL, United Kingdom

Language: English

Abstract: Resistotyping was used to characterise 106 strains of Candida albicans classified as to whether they came from deep or superficial infections. The data were analysed by logistic regression analysis. There was a statistically significant difference between the two groups of strains. After removal of variables by the log-likelihood method four resistotyping agents were found to predict source of strain: boric acid, benzalkonium chloride, malachite green and mercurochrome. Whilst there were phenotypic differences between strains isolated from deep and superficial sites it is not clear whether this strain represents different strain types or strain histories.

Country of Publication: Germany

Publication Type: Journal: Article

Subject Headings: article
Candida albicans
"*candidiasis/di [Diagnosis]"
clinical feature
fungus culture
human

nonhuman
phenotype
priority journal
*strain difference
virulence

Source: EMBASE

127. Chronic fungal vaginitis: The value of cultures

Citation: American Journal of Obstetrics and Gynecology, 1995, vol./is. 173/3 I(820-823), 0002-9378 (1995)

Author(s): Nyirjesy P.; Seeney S.M.; Grody M.H.T.; Jordan C.A.; Buckley H.R.

Institution: (Nyirjesy, Seeney, Grody, Jordan, Buckley) Department of Obstetrics/Gynecology, Temple University School of Medicine, 3401 N. Broad St., Philadelphia, PA 19140, United States

Language: English

Abstract: OBJECTIVE: Our purpose was to examine the importance of fungal cultures in evaluating patients with symptoms of chronic vaginitis by assessing the relative contribution of various yeast species and by comparing infections caused by Candida albicans with those caused by other species. STUDY DESIGN: A prospective observational study of patients referred with chronic vaginal symptoms was undertaken. In addition to a standard evaluation of symptoms, cultures for yeast were performed on modified Sabouraud agar plates. RESULTS: Seventy-seven isolates were obtained from 74 patients. A total of 68% were Candida albicans; 32% were other species. The clinical syndromes caused by non-Candida albicans isolates were indistinguishable from Candida albicans infections. Fluconazole gave a short term mycologic cure in all Candida albicans but only 25% of non-Candida albicans cases ($p < 0.001$). In non- Candida albicans infections, boric acid suppositories achieved the best mycologic cure rate (85%). CONCLUSION: Because non-Candida albicans species are responsible for a significant number of chronic fungal vaginal infections and are more resistant to therapy with fluconazole, fungal cultures are a valuable aid in confirming the diagnosis and selecting appropriate therapy.

Country of Publication: United States

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 23593-75-1 (clotrimazole); 86386-73-4 (fluconazole); 84625-61-6 (itraconazole); 1310-58-3 (potassium hydroxide)

Publication Type: Journal: Article

Subject Headings:
adult
article
Candida albicans
Candida glabrata
Candida parapsilosis
clinical trial
controlled clinical trial
controlled study
female
*fungus culture
human
intravaginal drug administration
major clinical study
"mycosis/di [Diagnosis]"
"mycosis/dt [Drug Therapy]"
"mycosis/et [Etiology]"
oral drug administration
priority journal
prospective study
Saccharomyces cerevisiae

sexual behavior
suppository
topical drug administration
treatment outcome
"*vagina candidiasis/di [Diagnosis]"
"*vagina candidiasis/dt [Drug Therapy]"
"*vagina candidiasis/et [Etiology]"
"*vaginitis/di [Diagnosis]"
"*vaginitis/dt [Drug Therapy]"
"*vaginitis/et [Etiology]"
"*boric acid/dt [Drug Therapy]"
"clotrimazole/dt [Drug Therapy]"
"*fluconazole/dt [Drug Therapy]"
"itraconazole/dt [Drug Therapy]"
potassium hydroxide

Source: EMBASE

128. Physiological traits associated with success of Candida albicans strains as commensal colonizers and pathogens.

Citation: Journal of clinical microbiology, Nov 1995, vol. 33, no. 11, p. 2920-2926, 0095-1137 (November 1995)

Author(s): Schmid, J; Hunter, P R; White, G C; Nand, A K; Cannon, R D

Abstract: DNA fingerprinting with the moderately repetitive sequence Ca3 has repeatedly identified groups of genetically similar strains of Candida albicans that are more frequently isolated than other groups of strains from human hosts in a geographical locale. Members of these groups are found in approximately 30% of healthy individuals and in up to 70% of patients suffering from candidiasis. The high prevalence of these strains implies that they are more successful in colonizing human hosts and in causing disease than other strains (J. Schmid, Clin. Adv. Treatment Fungal Infect. 4(6):12-16, 1993). In the present study, we have compared one such group of highly prevalent strains with other strains from the same locale to identify physiological traits a larger number of chemicals than other strains in a resistogram assay. When resistance to individual chemicals used in the resistogram assay was analyzed, strains from the group of highly prevalent strains were significantly more often resistant to boric acid, cetrimide, chlorhexidine, 5-fluorocytosine, and high sodium chloride concentrations than other strains. Strains from the group of highly prevalent strains also adhered significantly (1.5 times) better to saliva-coated surfaces than did other strains. Because members of highly prevalent groups of strains are the most common infectious agents in candidiasis, these physiological traits may be involved in determining not only the success of C. albicans in colonizing human hosts in general but also its ability to cause disease. Sodium chloride resistance and increased adherence were also associated with infectious isolates outside the group of highly prevalent strains, indicating that they may be of particular importance in pathogenesis.

Subject Headings:
Candida albicans
Host-Parasite Interactions
Antifungal Agents
Candidiasis
Index Medicus
Saliva
Humans
Virulence
Cell Adhesion
Drug Resistance Microbial
Anti-Infective Agents
DNA Fingerprinting

Source: Medline

Full Text: Available from *National Library of Medicine* in *Journal of Clinical Microbiology*

129. Biotypes of oral Candida albicans isolates in a Tanzanian child population

Citation: APMIS, 1996, vol./is. 104/9(623-628), 0903-4641 (1996)

Author(s): Matee M.I.; Samaranayake L.P.; Scheutz F.; Simon E.; Lyamuya E.F.; Mwinula J.

Institution: (Matee, Lyamuya) Dept. of Microbiology and Immunology, Muhimbili University, College of Health Sciences, Dar-es-Salaam, Tanzania; (Samaranayake) Oral Biology Unit, Faculty of Dentistry, University of Hong Kong, Hong Kong; (Scheutz) Dept. Oral Epidemiol. and Pub. Hlth., Royal Dental College, Aarhus University, Aarhus, Denmark; (Simon) Dept. of Oral Surg. and Oral Pathol., Muhimbili University, College of Health Sciences, Dar-es-Salaam, Tanzania; (Mwinula) Dept. Paediatr. Child Dent. Hlth., Muhimbili University, College of Health Sciences, Dar-es-Salaam, Tanzania; (Samaranayake) Oral Biology Unit, Faculty of Dentistry, University of Hong Kong, 34, Hospital Road, Hong Kong

Language: English

Abstract: Although biotypes of Candida albicans from adult populations, especially in the West, have been described, there are no data either from a child population, or from the African continent. Hence a total of 200 oral C. albicans isolates from Tanzanian children aged 6-24 months were biotyped using two commercially available API micromethod kit systems and a boric acid resistance test. The predominant biotypes, which comprised two thirds of the organisms isolated, were J1S (19.5%), A1S (16.0%), J1R (14.5%), A1R (9.5%) and P1R (7.5%). In total, 16 new biotypes comprising 44 (22%) isolates which have not hitherto been described were found in this Tanzanian population and, of these, the P1R biotype predominated with 15 (7.5%) isolates. There was no significant association between predominant biotypes (with clusters <15 isolates) and age, gender, breast feeding and malnutrition. These data indicate that the biotype profile of C. albicans isolates may differ in paediatric and adult populations, and/or global distribution of various subtypes of this common opportunistic pathogen.

Country of Publication: Denmark

Publication Type: Journal: Article

Subject Headings:
article
*Candida albicans
child
fungus culture
human
infant
*mouth flora
normal human
priority journal
Tanzania

Source: EMBASE

130. Biotypes of oral Candida albicans isolates in a Tanzanian child population.

Citation: APMIS : acta pathologica, microbiologica, et immunologica Scandinavica, Sep 1996, vol. 104, no. 9, p. 623-628, 0903-4641 (September 1996)

Author(s): Matee, M I; Samaranayake, L P; Scheutz, F; Simon, E; Lyamuya, E F; Mwinula, J

Abstract: Although biotypes of Candida albicans from adult populations, especially in the West, have been described, there are no data either from a child population, or from the African continent. Hence a total of 200 oral C. albicans isolates from Tanzanian children aged 6-24 months were biotyped using two commercially available API micromethod kit systems and a boric acid resistance test. The predominant biotypes, which comprised two thirds of the organisms isolated, were J1S (19.5%), A1S (16.0%), J1R (14.5%), A1R (9.5%) and P1R (7.5%). In total, 16 new biotypes comprising 44 (22%) isolates which have not hitherto been described were found in this Tanzanian population and, of these, the P1R biotype predominated with 15 (7.5%) isolates. There was no significant association between predominant biotypes (with clusters > or = 15 isolates) and age, gender, breast feeding and malnutrition. These data indicate that the biotype profile of C.

albicans isolates may differ in paediatric and adult populations, and/or global distribution of various subtypes of this common opportunistic pathogen.

Subject Headings:
Infant
Candida albicans
Tongue
Tanzania
Humans
Reproducibility of Results
Mycological Typing Techniques
Index Medicus
Child Preschool
Mouth Mucosa

Source: Medline

131. Successful use of boric acid to control azole-refractory Candida vaginitis in a woman with AIDS

Citation: Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology, 1997, vol./is. 16/3(219-220), 1077-9450 (1997)

Author(s): Shinohara Y.T.; Tasker S.A.

Institution: (Shinohara, Tasker) Department of Pharmacy, Naval Medical Center, San Diego, CA, United States

Language: English

Country of Publication: United States

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 467-63-0 (crystal violet); 548-62-9 (crystal violet); 86386-73-4 (fluconazole); 84625-61-6 (itraconazole)

Publication Type: Journal: Article

Subject Headings:
acquired immune deficiency syndrome
adult
article
"*candidiasis/dr [Drug Resistance]"
"*candidiasis/dt [Drug Therapy]"
case report
drug efficacy
female
human
*Human immunodeficiency virus infection
infection control
intravaginal drug administration
priority journal
suppository
"*vaginitis/dr [Drug Resistance]"
"*vaginitis/dt [Drug Therapy]"
"*boric acid/dt [Drug Therapy]"
crystal violet
fluconazole
itraconazole
pyrrole derivative

Source: EMBASE

132. Treatment of Torulopsis glabrata vaginitis: Retrospective review of boric acid therapy

Citation: Clinical Infectious Diseases, 1997, vol./is. 24/4(649-652), 1058-4838 (1997)

Author(s): Sobel J.D.; Chaim W.

Institution: (Sobel, Chaim) Division of Infections Diseases, Detroit Medical Center, Wayne State Univ. School of Medicine, Detroit, MI, United States; (Sobel) Division of Infectious Diseases, Harper Professional Building, 4160 John R Street, Detroit, MI 48201, United States

Language: English

Abstract: The charts of all patients who were seen at a vaginitis clinic between January 1989 and December 1994 were retrospectively reviewed; 80 patients whose vaginal cultures yielded Torulopsis glabrata were identified. Sixty of these patients experienced 75 symptomatic episodes of vaginitis attributed to T. glabrata, and these patients are the subject of this review. Of the 60 symptomatic patients, 40 had uncomplicated T. glabrata infection, and 20 had mixed infection, most commonly in association with bacterial vaginosis. Evaluation of treatment of T. glabrata vaginitis with vaginal boric acid (600 mg/d for 14 days) revealed clinical improvement or cure in 21 (81%) of 26 episodes and mycological eradication in 20 (77%) of 26 episodes. One-third of the patients received maintenance therapy with boric acid. The clinical response and mycological eradication rates associated with therapy with topical and systemic azoles were < 50%. The rate of therapeutic response to boric acid administered to patients with mixed T. glabrata infection remained high. In conclusion, in this series of patients with T. glabrata vaginitis, for whom repeated courses of antimycotic therapy with azoles had previously failed, boric acid emerged as a promising modality of therapy.

Country of Publication: United States

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid)

Publication Type: Journal: Review

Subject Headings:
bacterium culture
female
human
"infection/dt [Drug Therapy]"
"infection/et [Etiology]"
major clinical study
priority journal
review
*Torulopsis glabrata
"*vaginitis/dt [Drug Therapy]"
"*boric acid/dv [Drug Development]"
"*boric acid/dt [Drug Therapy]"

Source: EMBASE

Full Text: Available from *UHB Online* in *Clinical Infectious Diseases*; Note: ; Notes: Click on 'Sign in via OpenAthens' and enter login credentials

133. Over-the-counter and alternative medicines in the treatment of chronic vaginal symptoms

Citation: Obstetrics and Gynecology, July 1997, vol./is. 90/1(50-53), 0029-7844 (July 1997)

Author(s): Nyirjesy P.; Weitz M.V.; Grody M.H.T.; Lorber B.

Institution: (Nyirjesy, Weitz, Grody, Lorber) Dept. Obstet., Gynecol.,/Repro. Sci., Section of Infectious Diseases, Temple University School of Medicine, Philadelphia, PA, United States; (Nyirjesy) Dept. Obstet., Gynecol.,/Repro. Sci., Temple University School of Medicine, 3401 North Broad Street, Philadelphia, PA 19140, United States

Language: English

Abstract: Objective: To investigate the use of over-the-counter and alternative medicines in women with chronic vaginal symptoms. Methods: One hundred five patients, referred by their gynecologists for evaluation of chronic vaginal symptoms, were interviewed about their use of over-the-counter and alternative medicines during the preceding year, the amount of money spent on each, and whether or not their physicians had been informed of these treatments. Results: The mean age was 36 years, and one-half had finished college. The

median symptom duration was 2 years. Seventy-seven (73.3%) patients had self-treated with over-the-counter medications such as miconazole (74% of over-the-counter users), clotrimazole (38.2%), or povidone-iodine (13.2%). The median expenditure for over-the-counter use was $50 (range $2-1000). Forty-four (41.9%) had used alternative medicines, most frequently acidophilus pills orally (50%) or vaginally (11.4%), yogurt orally (20.5%) or vaginally (18.2%), vinegar douches (13.6%), and boric acid (13.6%). The median expenditure for alternative medicines was $35 (range $0- 1200). Fewer physicians were aware of the use of alternative (70.5%) than of over-the-counter medicines (88.3%). Although most patients thought that vulvovaginal candidiasis was the cause of their symptoms, the most common diagnoses at initial presentation were candidiasis in 29 (27.6%), vulvar vestibulitis in 18 (17.1%), irritant dermatitis in 16 (15.2%), and bacterial vaginosis in 11 (10.5%). Women who actually had candidiasis were more likely to have used alternative medicines (odds ratio 2.31, 95% confidence interval 1.00, 5.42) than other patients. Conclusion: Women with chronic vaginal symptoms often use over-the-counter and alternative medicines that add to health care costs and are unlikely to be of benefit.

Country of Publication: United States

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 8028-52-2 (vinegar)

Publication Type: Journal: Article

Subject Headings:
acupuncture
article
garlic
priority journal
tea
"*vagina disease/dt [Drug Therapy]"
*boric acid
"*non prescription drug/dt [Drug Therapy]"
*vinegar
yoghurt

Source: EMBASE

134. Over-the-counter and alternative medicines in the treatment of chronic vaginal symptoms.

Citation: Obstetrics and gynecology, Jul 1997, vol. 90, no. 1, p. 50-53, 0029-7844 (July 1997)

Author(s): Nyirjesy, P; Weitz, M V; Grody, M H; Lorber, B

Abstract: To investigate the use of over-the-counter and alternative medicines in women with chronic vaginal symptoms. One hundred five patients, referred by their gynecologists for evaluation of chronic vaginal symptoms, were interviewed about their use of over-the-counter and alternative medicines during the preceding year, the amount of money spent on each, and whether or not their physicians had been informed of these treatments. The mean age was 36 years, and one-half had finished college. The median symptom duration was 2 years. Seventy-seven (73.3%) patients had self-treated with over-the-counter medications such as miconazole (74% of over-the-counter users), clotrimazole (38.2%), or povidone-iodine (13.2%). The median expenditure for over-the-counter use was %0 (range $2-1000). Forty-four (41.9%) had used alternative medicines, most frequently acidophilus pills orally (50%) vaginally (11.4%), yogurt orally (20.5%) or vaginally (18.2%), vinegar douches (13.6%), and boric acid (13.6%). The median expenditure for alternative medicines was $35 (range $0-1200). Fewer physicians were aware of the use of alternative (70.5%) that of over-the-counter medicines (88.3%). Although most patients thought that vulvovaginal candidiasis was the cause of their symptoms, the most common diagnoses at initial presentation were candidiasis in 29 (27.6%), vulvar vestibulitis in 18 (17.1%), irritant dermatitis in 16 (15.2%), and bacterial vaginosis in 11 (10.5%). Women who actually had candidiasis were more likely to have used alternative medicines (odds ration 2.31, 95% confidence interval 1.00, 5.42) than other patients. Women with chronic vaginal symptoms often use

over-the-counter and alternative medicines that add to health care costs and are unlikely to be of benefit.

Subject Headings:
Vaginitis
Drug Utilization
Middle Aged
Humans
Index Medicus
Adult
Female
Abridged Index Medicus
Nonprescription Drugs
Complementary Therapies
Chronic Disease

Source: Medline

135. Boric acid vaginal suppositories: A brief review

Citation: Infectious Diseases in Obstetrics and Gynecology, 1998, vol./is. 6/4(191-194), 1064-7449 (1998)

Author(s): Prutting S.M.; Cerveny J.D.

Institution: (Prutting, Cerveny) Ambulatory Care, Medical College of South Carolina, Charleston, SC, United States; (Cerveny) Ambulatory Care, Medical College of South Carolina, 590 MUSC, Charleston, SC 29425, United States

Language: English

Country of Publication: United Kingdom

Publisher: Parthenon Publishing Group Ltd

CAS Registry Number: 1397-89-3 (amphotericin B); 30652-87-0 (amphotericin B); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 23593-75-1 (clotrimazole); 86386-73-4 (fluconazole); 2022-85-7 (flucytosine); 84625-61-6 (itraconazole); 65277-42-1 (ketoconazole); 22916-47-8 (miconazole); 67915-31-5 (terconazole)

Publication Type: Journal: Review

Subject Headings:
*bacteriostasis
drug formulation
drug mechanism
drug tolerability
"erythema/si [Side Effect]"
female
human
human cell
human tissue
intravaginal drug administration
priority journal
review
Saccharomyces cerevisiae
suppository
"vagina discharge/si [Side Effect]"
"*vaginitis/dt [Drug Therapy]"
"amphotericin B/ad [Drug Administration]"
"amphotericin B/dt [Drug Therapy]"
"*boric acid/ae [Adverse Drug Reaction]"
"*boric acid/ad [Drug Administration]"
"*boric acid/dt [Drug Therapy]"
"*boric acid/pr [Pharmaceutics]"
"*boric acid/pk [Pharmacokinetics]"
"*boric acid/pd [Pharmacology]"

"clotrimazole/ad [Drug Administration]"
"clotrimazole/dt [Drug Therapy]"
"*fluconazole/ad [Drug Administration]"
"*fluconazole/dt [Drug Therapy]"
"*flucytosine/ad [Drug Administration]"
"*flucytosine/dt [Drug Therapy]"
"*itraconazole/ad [Drug Administration]"
"*itraconazole/dt [Drug Therapy]"
"*ketoconazole/ad [Drug Administration]"
"*ketoconazole/dt [Drug Therapy]"
"*miconazole/ad [Drug Administration]"
"*miconazole/dt [Drug Therapy]"
"suppository base/ae [Adverse Drug Reaction]"
"suppository base/ad [Drug Administration]"
"suppository base/dt [Drug Therapy]"
"suppository base/pr [Pharmaceutics]"
"suppository base/pk [Pharmacokinetics]"
"suppository base/pd [Pharmacology]"
"terconazole/ad [Drug Administration]"
"terconazole/dt [Drug Therapy]"

Source: EMBASE

Full Text: Available from *National Library of Medicine* in *Infectious Diseases in Obstetrics and Gynecology*

136. Boric acid vaginal suppositories: a brief review.

Citation: Infectious diseases in obstetrics and gynecology, Jan 1998, vol. 6, no. 4, p. 191-194, 1064-7449 (1998)

Author(s): Prutting, S M; Cerveny, J D

Subject Headings:
Administration Intravaginal
Hydrogen-Ion Concentration
Antifungal Agents
Humans
Index Medicus
Female
Boric Acids
Suppositories
Anti-Infective Agents

Source: Medline

Full Text: Available from *National Library of Medicine* in *Infectious Diseases in Obstetrics and Gynecology*

137. Resistogram typing of oral Candida albicans isolates from normal subjects in three successive trials.

Citation: Revista iberoamericana de micología, Mar 1998, vol. 15, no. 1, p. 19-21, 1130-1406 (March 1998)

Author(s): Nakamura, K; Ito-Kuwa, S; Nakamura, Y; Aoki, S; Vidotto, V; Sinicco, A

Abstract: Sixty-six oral strains of Candida albicans, which had been consecutively isolated from 22 normal, young females in three isolation trials at intervals of one to three weeks, were biotyped by their susceptibility to boric acid, cetrimide, silver nitrate, sodium periodate and sodium selenite. The 66 isolates were grouped into 13 resistogram types. An identical biotype strain was found three times and twice in seven and six each of the 22 subjects in the three isolation trials, respectively. In the remaining nine subjects, different strains were found at the three trials. These results suggested that certain strains tended to persist in the oral cavity of the normal subjects although changes in the biotype of oral C. albicans strains occurred to a certain extent.

Subject Headings:

Source: Medline

138. Susceptibility of Candida species isolated from female prostitutes with vulvovaginitis to antifungal agents and boric acid

Citation: European Journal of Clinical Microbiology and Infectious Diseases, 1999, vol./is. 18/1(59-61), 0934-9723 (1999)

Author(s): Otero L.; Fleites A.; Mendez F.J.; Palacio V.; Vazquez F.

Institution: (Otero) Servicio de Microbiologia, Hospital de Cabuenes, Gijon, Spain; (Fleites) Serv. de Microbiol. y Enferm. Infec., Hospital Central de Asturias, Oviedo, Spain; (Mendez) Servicio de Microbiologia, Hospital Central de Asturias, Oviedo, Spain; (Palacio) Unidad de Enferm. de Transmis. Sex., Hospital Monte Naranco, Oviedo, Spain; (Vazquez) Servicio de Microbiologia, Hospital Monte Naranco, Depto. de Biologia Funcional, C/ Julian Claveria s/n, E-33006 Oviedo, Spain

Language: English

Abstract: The aim of this study was to determine the antifungal susceptibility of 108 Candida albicans and 23 Candida glabrata isolates obtained from female prostitutes with vulvovaginitis, a population for which available data is limited. Amphotericin B, flucytosine, and fluconazole were tested by broth microdilution, and boric acid was tested by the agar dilution method. The susceptibility patterns found in this population were the same as those in the general population. Candida glabrata required greater concentrations of boric acid for inhibition in vitro than did Candida albicans.

Country of Publication: Germany

Publisher: Springer Verlag

CAS Registry Number: 1397-89-3 (amphotericin B); 30652-87-0 (amphotericin B); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 86386-73-4 (fluconazole); 2022-85-7 (flucytosine)

Publication Type: Journal: Article

Subject Headings:
article
Candida
Candida albicans
Candida glabrata
concentration response
controlled study
drug efficacy
female
human
major clinical study
priority journal
prostitution
"*vulvovaginitis/dt [Drug Therapy]"
"*vulvovaginitis/et [Etiology]"
"amphotericin B/cm [Drug Comparison]"
"amphotericin B/dt [Drug Therapy]"
"*antifungal agent/cm [Drug Comparison]"
"*antifungal agent/dt [Drug Therapy]"
"*boric acid/cm [Drug Comparison]"
"*boric acid/dt [Drug Therapy]"
"fluconazole/cm [Drug Comparison]"
"fluconazole/dt [Drug Therapy]"
"flucytosine/cm [Drug Comparison]"
"flucytosine/dt [Drug Therapy]"

Source: EMBASE

Full Text: Available from *UHB Online* in *European Journal of Clinical Microbiology and Infectious Diseases*

Available from *ProQuest* in *European Journal of Clinical Microbiology and Infectious Diseases*
Available from *Springer NHS Pilot 2014 (NESLi2)* in *European Journal of Clinical Microbiology & Infectious Diseases*; Note: ; Collection notes: Academic-License. Please when asked to pick an institution please pick NHS. Please also note access is from 1997 to date only.

139. Terconazole cream for non-Candida albicans fungal vaginitis: Results of a retrospective analysis

Citation: Infectious Diseases in Obstetrics and Gynecology, 2000, vol./is. 8/5-6(240-243), 1064-7449 (2000)

Author(s): Sood G.; Nyirjesy P.; Weitz M.V.; Chatwani A.

Institution: (Sood, Nyirjesy, Weitz, Chatwani) Department of Ob/Gyn/RS, Temple University School of Medicine, 3401 N. Broad Street, Philadelphia, PA 19140, United States

Language: English

Abstract: Objective: Although it is FDA-approved for use in vulvovaginal candidiasis caused by non-Candida albicans species, terconazole cream has not been studied in patients with these infections. We sought to assess the clinical and mycological efficacy of terconazole cream in women with non-C. albicans vaginitis. Methods: The records of patients who had received a 7-day course of terconazole cream for culture-proved non-C. albicans vaginitis were reviewed. Data with regard to patient demographics, clinical and mycologic response to therapy within 1 month of treatment, and outcome with other antifungal therapies were analyzed. Results: Twenty-eight patients received terconazole cream for non-C. albicans infections. Three patients did not return for follow-up. The median age was 45 years. Seven (28%) patients were nulliparous. The median duration of symptoms was 3 years. Nine patients (36%) had received terconazole within the 6 months prior to referral. Overall, there were 20 C. glabrata cases, 3 C. parapsilosis, and 2 C. lusitaniae. Fourteen (56%) patients achieved a mycologic cure; 11 (44%) noted a resolution of their symptoms. Prior terconazole use was not associated with treatment failure (P = 0.09). Ten failures received boric acid suppositories as subsequent treatment; a cure was effected in 4 (40%). Two of three patients (67%) were eventually cured with flucytosine cream. Five (20%) patients remained uncured. Conclusions: Terconazole cream may be an appropriate first-line treatment for non C. albicans vaginitis, even in patients who have previously received the drug. © 2000 Wiley-Liss, Inc.

Country of Publication: United Kingdom

Publisher: Parthenon Publishing Group Ltd

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 2022-85-7 (flucytosine); 67915-31-5 (terconazole)

Publication Type: Journal: Article

Subject Headings:
article
Candida glabrata
candida lusitaniae
candidiasis
clinical article
drug efficacy
female
fungus
human
priority journal
treatment outcome
"*vaginitis/dt [Drug Therapy]"
"boric acid/dt [Drug Therapy]"
"boric acid/va [Intravaginal Drug Administration]"
"flucytosine/dt [Drug Therapy]"
"flucytosine/tp [Topical Drug Administration]"
"*terconazole/dt [Drug Therapy]"
"*terconazole/tp [Topical Drug Administration]"

Source: EMBASE

Full Text: Available from *National Library of Medicine* in *Infectious Diseases in Obstetrics and Gynecology*

140. Boric acid pessaries: Efficacy and toxicity in treatment of chronic vulvo vaginal candidiasis

Citation: CME Bulletin Sexually Transmitted Infections and HIV, 2000, vol./is. 4/2(27-28), 1367-014X (2000)

Author(s): Carne C.

Institution: (Carne) Department of GU Medicine, Addenbrooke's Hospital, Hills Road, Cambridge CB2 2QQ, United Kingdom

Language: English

Abstract: Boric acid treatment is one of a limited number of useful options in cases of vulvo-vaginal candidiasis that fail to respond to topical or oral azoles. The usual dose is one 600 mg pessary nocte for two weeks. If maintenance therapy is being considered an appreciation of the potential dangers from boric acid toxicity is necessary. Traumatised vaginal mucosa might absorb appreciable quantities of boric acid. Prolonged absorption causes anorexia, weight loss, vomiting, mild diarrhoea, skin rash, alopecia, convulsions and anaemia. Serum total boron is worth measuring in someone who is exhibiting symptoms of boric acid toxicity. Patients embarking on long term treatment should be warned about the possibility of toxicity.

Country of Publication: United Kingdom

Publisher: Rila Publications Ltd

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid)

Publication Type: Journal: Review

Subject Headings:
alopecia
anemia
anorexia
chronic disease
convulsion
diarrhea
dose calculation
drug absorption
drug blood level
drug efficacy
"drug intoxication/di [Diagnosis]"
human
lethal dose
rash
review
"*vagina candidiasis/dt [Drug Therapy]"
vagina pessary
vomiting
weight reduction
"*boric acid/dt [Drug Therapy]"
"*boric acid/to [Drug Toxicity]"
"*boric acid/va [Intravaginal Drug Administration]"
"*boric acid/pr [Pharmaceutics]"
"*boric acid/pk [Pharmacokinetics]"
"*boric acid/pd [Pharmacology]"

Source: EMBASE

141. Phenotypic characterisation of Candida albicans isolated from chronic hyperplastic candidosis

Citation: Journal of Medical Microbiology, 2000, vol./is. 49/2(199-202), 0022-2615 (2000)

Author(s): Williams D.W.; Wilson M.J.; Potts A.J.C.; Lewis M.A.O.

Institution: (Williams, Wilson, Potts, Lewis) Department of Oral Surgery, Medicine and Pathology, Dental School, Heath Park, Cardiff, CF4 4XY, United Kingdom

Language: English

Abstract: The phenotypes of 35 Candida albicans isolates from 19 patients with chronic hyperplastic candidosis (CHC) and 35 isolates from 30 patients with non-CHC infections were compared. Typing was based on carbohydrate assimilation, chemical sensitivity and serology. Eight carbohydrate assimilation profiles were evident with the API-20C system and a single profile predominated for isolates from CHC (17 of 19 patients; 89%) and non-CHC (18 of 30 patients; 63%). Chemical sensitivity tests revealed four profiles with no significant difference between CHC and non-CHC isolates. Serotype A predominated for isolates from both CHC (15 of 19 patients; 79%) and non-CHC (25 of 30 patients; 83%) infections. Boric acid resistance was more prevalent in CHC isolates, although a significant difference was not apparent. In summary, there was no overall difference in the phenotypes of isolates from CHC and non-CHC patients, and clonal restriction of CHC isolates was not demonstrated.

Country of Publication: United Kingdom

Publisher: Lippincott Williams and Wilkins

Publication Type: Journal: Article

Subject Headings:
article
*Candida albicans
*candidiasis
nonhuman
phenotype
priority journal
serotype
carbohydrate

Source: EMBASE

142. Biotypes of oral Candida albicans isolated from AIDS patients and HIV-free subjects in Thailand

Citation: Journal of Oral Pathology and Medicine, May 2000, vol./is. 29/5(193-199), 0904-2512 (May 2000)

Author(s): Teanpaisan R.; Nittayananta W.; Chongsuvivatwong V.

Institution: (Teanpaisan, Nittayananta) Department of Stomatology, Faculty of Dentistry, Hat-Yai, Songkhla, Thailand; (Chongsuvivatwong) Epidemiology Unit, Faculty of Medicine, Prince of Songkla University, Hat-Yai, Songkhla, Thailand; (Teanpaisan) Department of Stomatology, Faculty of Dentistry, Prnc. of Songkla University, Hat-Yai, P.O. Box 17, Khor Hong, Songkhla 90112, Thailand

Language: English

Abstract: This study was conducted to examine biotypes and antifungal susceptibility patterns of oral Candida albicans isolated from HIV-infected patients, HIV-free patients with candidiasis and healthy subjects. All isolates were biotyped using a typing system based on enzyme profiles, carbohydrate assimilation patterns and boric acid resistance. Thirty-eight biotypes were found amongst 218 oral C. albicans isolates. The major biotype found was A1S, which accounted for 32.6% of all isolates, and this biotype was the most common in all groups. There was a greater variety of biotypes of C. albicans in the HIV-infected group than in the other groups; however, there was no statistically significant difference between the groups. The minimum inhibitory concentrations (MICs) of a total of 118 isolates were determined for amphotericin B and for ketoconazole using the National Committee for Clinical Laboratory Standards (NCCLS) broth macrodilution method and the E-test. When the antifungal susceptibility patterns among the groups were compared, a statistically significant difference was found only

with amphotericin B. The median MIC of amphotericin B in the HIV-infected group was higher than in the healthy group (P = 0.013, NCCLS method; P = 0.002, E-test). However, this difference in sensitivity was not restricted to any sub-type investigated. Our results showed that the biotype patterns of C. albicans isolates that colonize HIV-infected patients are similar to those of HIV-free subjects, and there is no relationship between antifungal susceptibility patterns and the biotypes.

Country of Publication: Denmark

Publisher: Blackwell Munksgaard

CAS Registry Number: 1397-89-3 (amphotericin B); 30652-87-0 (amphotericin B); 65277-42-1 (ketoconazole)

Publication Type: Journal: Article

Subject Headings:
"*AIDS related complex/dt [Drug Therapy]"
article
*Candida albicans
classification
dose response
drug effect
human
microbiological examination
microbiology
saliva
*serodiagnosis
"*thrush/dt [Drug Therapy]"
"amphotericin B/ad [Drug Administration]"
"ketoconazole/ad [Drug Administration]"

Source: EMBASE

143. Candida albicans strain differentiation in complete denture wearers

Citation: The new microbiologica : official journal of the Italian Society for Medical, Odontoiatric, and Clinical Microbiology (SIMMOC), July 2000, vol./is. 23/3(329-337), 1121-7138 (Jul 2000)

Author(s): Abu-Elteen K.H.

Institution: (Abu-Elteen) Department of Biological Sciences, Faculty of Science, Hashemite University, Zarqa, Jordan.

Language: English

Abstract: Strain differentiation of 66 clinical isolates of Candida albicans obtained from healthy dentate and complete denture wearers was performed. Resistogram method based on differences in the resistance of C. albicans isolates to sodium selenite, boric acid, cetrimide, sodium periodate and silver nitrate was used for strain differentiation. Of the 32 potential strains that can be distinguished, 14 different resistogram strains of C. albicans were found among the 66 isolates tested. Strain-C--was the most predominant (24.3% of total isolates), while strain A-CDE was the least predominant (1.5%). The results showed no particular association of certain strains with Candida infections in complete denture wearers. Sensitivity to antifungal agents showed that isolates from different strains were most sensitive to amphotericin B and nystatin and least sensitive to miconazole.

Country of Publication: Italy

CAS Registry Number: 1397-89-3 (amphotericin B); 30652-87-0 (amphotericin B); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 57-09-0 (cetrimide); 6899-10-1 (cetrimide); 8044-71-1 (cetrimide); 22916-47-8 (miconazole); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin); 15056-35-6 (periodate); 10450-60-9 (periodic acid); 13444-71-8 (periodic acid); 7761-88-8 (silver nitrate); 10102-18-8 (sodium selenite)

Publication Type: Journal: Article

Subject Headings:
antibiotic resistance
article
*Candida albicans
classification
"*denture/ae [Adverse Drug Reaction]"
drug effect
human
microbiological examination
microbiology
physiology
*stomatitis
*thrush
"amphotericin B/pd [Pharmacology]"
"antifungal agent/pd [Pharmacology]"
"boric acid/pd [Pharmacology]"
"cetrimide/pd [Pharmacology]"
"miconazole/pd [Pharmacology]"
"nystatin/pd [Pharmacology]"
periodate
"periodic acid/pd [Pharmacology]"
"silver nitrate/pd [Pharmacology]"
"sodium selenite/pd [Pharmacology]"

Source: EMBASE

144. Phenotypes and randomly amplified polymorphic DNA profiles of Candida albicans isolates from root canal infections in a Finnish population

Citation: Oral Microbiology and Immunology, 2001, vol./is. 16/2(106-112), 0902-0055 (2001)

Author(s): Waltimo T.M.T.; Dassanayake R.S.; Orstavik D.; Haapasalo M.P.P.; Samaranayake L.P.

Institution: (Waltimo, Orstavik) NIOM, Scandinavian Institute of Dental Materials, Haslum, Norway; (Waltimo) Institute of Dentistry, University of Helsinki, Helsinki, Finland; (Dassanayake, Samaranayake) Faculty of Dentistry, University of Hong Kong, Hong Kong, Hong Kong; (Haapasalo) Division of Endodontics, Institute of Dentistry, University of Oslo, Oslo, Norway; (Waltimo) Institute of Dentistry, PL 41, FIN-00014 Helsinki, Finland

Language: English

Abstract: A total of thirty-seven Candida albicans isolates from root canal infections in a Finnish population were subtyped using phenotypic and genotypic methods. A previously described biotyping method based on the presence of five different enzymes, assimilation of eleven different carbohydrates and boric acid sensitivity of the yeasts was used to determine the phenotype. Commercially available API ZYM and API 20 C test kits were used to determine the presence of enzymes and assimilation of carbohydrates. The sensitivity of the isolates to boric acid was tested by their ability to grow on yeast-nitrogen-agar with incorporated boric acid (1.8 mg . ml⁻¹). Combination of the tests revealed a total of 14 different phenotypes. The majority of the isolates, 26 strains, were classifiable into three major phenotypes: 16 isolates (43.2%) belonged to phenotype A1R, six (16.2%) to A1S and four (10.8%) to B1S. The remaining 11 phenotypes represented only a single isolate each. The randomly amplified polymorphic DNA profiles were used to determine the genotypes. For this purpose two different primers, RSD6 and RSD12 were used to develop a combination randomly amplified polymorphic DNA profile for each isolate. Altogether 31 genotypes were noted among the 37 isolates, of which only three pairs of isolates presented with congruent phenotypic and genotypic profiles. The heterogeneity of both the phenotypic and randomly amplified polymorphic DNA profiles of C. albicans isolates from root canal infections is akin to previous reports from other oral and non-oral sources in different geographic locales.

Country of Publication: Denmark

Publisher: Blackwell Munksgaard

Publication Type: Journal: Article

Subject Headings:

Source: EMBASE

145. Candida lusitaniae as an unusual cause of recurrent vaginitis and its successful treatment with intravaginal boric acid

Citation: Infectious Diseases in Obstetrics and Gynecology, 2001, vol./is. 9/4(245-247), 1064-7449 (2001)

Author(s): Silverman N.S.; Morgan M.; Nichols W.S.

Institution: (Silverman) Department of Obstetrics and Gynecology, Burns and Allen Research Institute, UCLA School of Medicine, Los Angeles, CA 90048, United States; (Morgan, Nichols) Department of Pathology and Laboratory Medicine, Burns and Allen Research Institute, UCLA School of Medicine, Los Angeles, CA, United States

Language: English

Abstract: Increasing use of short-course antifungal therapies in patients with recurrent vulvovaginitis may enable the emergence of less-common, more resistant yeast strains as vaginal pathogens. We report the case of a patient with chronically symptomatic and repeatedly treated vaginal candidiasis whose infection was attributable to Candida lusitaniae, a previously unreported cause of candidal vaginitis.

Country of Publication: United Kingdom

Publisher: Parthenon Publishing Group Ltd

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 18323-44-9 (clindamycin); 86386-73-4 (fluconazole); 65277-42-1 (ketoconazole)

Publication Type: Journal: Article

Subject Headings:
adult
antibiotic resistance
article
*candida lusitaniae
case report
clinical feature
diagnostic procedure
disease course
female
follow up
human
priority journal
"recurrent infection/di [Diagnosis]"
"recurrent infection/dr [Drug Resistance]"
"recurrent infection/dt [Drug Therapy]"
"recurrent infection/et [Etiology]"
suppository
symptomatology
treatment outcome
"vagina candidiasis/di [Diagnosis]"
"vagina candidiasis/dr [Drug Resistance]"
"vagina candidiasis/dt [Drug Therapy]"
"vagina candidiasis/et [Etiology]"
"*vulvovaginitis/di [Diagnosis]"
"*vulvovaginitis/dr [Drug Resistance]"
"*vulvovaginitis/dt [Drug Therapy]"
"*vulvovaginitis/et [Etiology]"
"antifungal agent/dt [Drug Therapy]"
"antifungal agent/tp [Topical Drug Administration]"

"antiinfective agent/dt [Drug Therapy]"
"antiinfective agent/tp [Topical Drug Administration]"
"*boric acid/do [Drug Dose]"
"*boric acid/dt [Drug Therapy]"
"*boric acid/va [Intravaginal Drug Administration]"
"clindamycin/dt [Drug Therapy]"
"clindamycin/va [Intravaginal Drug Administration]"
"fluconazole/do [Drug Dose]"
"fluconazole/dt [Drug Therapy]"
"fluconazole/po [Oral Drug Administration]"
"ketoconazole/do [Drug Dose]"
"ketoconazole/dt [Drug Therapy]"
"ketoconazole/po [Oral Drug Administration]"

Source: EMBASE

Full Text: Available from *National Library of Medicine* in *Infectious Diseases in Obstetrics and Gynecology*

146. Efficacy of maintenance therapy with topical boric acid in comparison with oral itraconazole in the treatment of recurrent vulvovaginal candidiasis

Citation: American Journal of Obstetrics and Gynecology, 2001, vol./is. 184/4(598-602), 0002-9378 (2001)

Author(s): Guaschino S.; De Seta F.; Sartore A.; Ricci G.; De Santo D.; Piccoli M.; Alberico S.

Institution: (Guaschino, De Seta, Sartore, Ricci, De Santo, Piccoli, Alberico) Department of Obstetrics and Gynecology, University of Trieste, Istituto Di Ricovero E Cura A Carattere Scientifico Burlo Garofolo

Language: English

Abstract: OBJECTIVE: Our purpose was to examine the efficacy of a topical long-term treatment with boric acid versus an oral long-term treatment (itraconazole) in the cure and prevention of recurrent vulvovaginal candidiasis. STUDY DESIGN: A prospective, nonrandomized study of patients affected by recurrent vulvovaginal candidiasis was undertaken. In 3 years we recruited 22 consecutive patients who underwent therapy with itraconazole (group 1) or boric acid (group 2). Women were followed up for 1 year, with clinic and microbiologic controls after 1, 3, 6, and 12 months after the first visit. RESULTS: During the treatment, the positive culture results (15.1% vs 12.1%) and the signs and symptoms (33.3% vs 24.2%) were similar within the 2 groups, with no significant statistical difference. With the withdrawal, after 6 months relapses were common in the 2 groups (54.5%). CONCLUSIONS: Boric acid seems to be a valid and promising therapy both in the cure of the vaginal infection and in the prevention of relapses of recurrent vulvovaginal candidiasis, but its efficacy ends with the suspension of the therapy.

Country of Publication: United States

Publisher: Mosby Inc.

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 84625-61-6 (itraconazole)

Publication Type: Journal: Article

Subject Headings:
adult
article
clinical article
controlled study
drug efficacy
female
fungus culture
human
infection prevention
maintenance therapy

priority journal
recurrent disease
relapse
symptomatology
"*vagina candidiasis/dt [Drug Therapy]"
"*vagina candidiasis/pc [Prevention]"
"*boric acid/cm [Drug Comparison]"
"*boric acid/dt [Drug Therapy]"
"*boric acid/tp [Topical Drug Administration]"
"*itraconazole/cm [Drug Comparison]"
"*itraconazole/dt [Drug Therapy]"
"*itraconazole/po [Oral Drug Administration]"

Source: EMBASE

147. Efficacy of maintenance therapy with topical boric acid in comparison with oral itraconazole in the treatment of recurrent vulvovaginal candidiasis.

Citation: American journal of obstetrics and gynecology, Mar 2001, vol. 184, no. 4, p. 598-602, 0002-9378 (March 2001)

Author(s): Guaschino, S; De Seta, F; Sartore, A; Ricci, G; De Santo, D; Piccoli, M; Alberico, S

Abstract: Our purpose was to examine the efficacy of a topical long-term treatment with boric acid versus an oral long-term treatment (itraconazole) in the cure and prevention of recurrent vulvovaginal candidiasis. A prospective, nonrandomized study of patients affected by recurrent vulvovaginal candidiasis was undertaken. In 3 years we recruited 22 consecutive patients who underwent therapy with itraconazole (group 1) or boric acid (group 2). Women were followed up for 1 year, with clinic and microbiologic controls after 1, 3, 6, and 12 months after the first visit. During the treatment, the positive culture results (15.1% vs 12.1%) and the signs and symptoms (33.3% vs. 24.2%) were similar within the 2 groups, with no significant statistical difference. With the withdrawal, after 6 months relapses were common in the 2 groups (54.5%). Boric acid seems to be a valid and promising therapy both in the cure of the vaginal infection and in the prevention of relapses of recurrent vulvovaginal candidiasis, but its efficacy ends with the suspension of the therapy.

Subject Headings:
Vulvar Diseases
Prospective Studies
Antifungal Agents
Humans
Candidiasis
Vaginal Diseases
Recurrence
Adult
Female
Boric Acids
Itraconazole
Abridged Index Medicus
Index Medicus

Source: Medline

148. Phenotypes and randomly amplified polymorphic DNA profiles of Candida albicans isolates from root canal infections in a Finnish population.

Citation: Oral microbiology and immunology, Apr 2001, vol. 16, no. 2, p. 106-112, 0902-0055 (April 2001)

Author(s): Waltimo, T M; Dassanayake, R S; Ørstavik, D; Haapasalo, M P; Samaranayake, L P

Abstract: A total of thirty-seven Candida albicans isolates from root canal infections in a Finnish population were subtyped using phenotypic and genotypic methods. A previously described biotyping method based on the presence of five different enzymes, assimilation of eleven different carbohydrates and boric acid sensitivity of the yeasts was used to

determine the phenotype. Commercially available API ZYM and API 20 C test kits were used to determine the presence of enzymes and assimilation of carbohydrates. The sensitivity of the isolates to boric acid was tested by their ability to grow on yeast-nitrogen-agar with incorporated boric acid (1.8 mg. ml(-1)). Combination of the tests revealed a total of 14 different phenotypes. The majority of the isolates, 26 strains, were classifiable into three major phenotypes: 16 isolates (43.2%) belonged to phenotype A1R, six (16.2%) to A1S and four (10.8%) to B1S. The remaining 11 phenotypes represented only a single isolate each. The randomly amplified polymorphic DNA profiles were used to determine the genotypes. For this purpose two different primers, RSD6 and RSD12 were used to develop a combination randomly amplified polymorphic DNA profile for each isolate. Altogether 31 genotypes were noted among the 37 isolates, of which only three pairs of isolates presented with congruent phenotypic and genotypic profiles. The heterogeneity of both the phenotypic and randomly amplified polymorphic DNA profiles of C. albicans isolates from root canal infections is akin to previous reports from other oral and non-oral sources in different geographic locales.

Subject Headings:

Genotype
Candida albicans
Periapical Periodontitis
Finland
Humans
Phenotype
Dentistry
Random Amplified Polymorphic DNA Technique
Bacterial Typing Techniques
DNA Fingerprinting

Source: Medline

149. Treatment of chronic recurrent vulvovaginal candidiasis by oral fluconazole and prohylactic local boric acid [Hungarian] Chronicus recidivalo vulvovaginalis candidosis kezelese per os fluconazollal es prophylaxisa lokalis borsavval

Original Title: Chronicus recidivalo vulvovaginalis candidosis kezelese per os fluconazollal es prophylaxisa lokalis borsavval

Citation: Magyar Noorvosok Lapja, 2002, vol./is. 65/6(437-441), 0025-021X (2002)

Author(s): Andras U.; Istvan S.; Zoltan P.

Language: Hungarian

Abstract: The treatment of recurrent vulvovaginal candidiasis includes an initial regimen of oral antimycotic drug to ensure clinical remission continued with maintenance therapy to prevent recurrent infection. This maintenance therapy should last at least 6 month. At the I. Department of Obstetrics and Gynecology of Semmelweis University we performed follow up of 24 nonpregnant patients with recurrent vulvovaginal candidiasis who had four or more previous episodes of proved infection during a 12-month period. After treating the acute fungal vaginitis with 1 x 150 mg (rarely 2 x 150 mg) oral fluconazole we started the maintenance therapy with topical boric acid. The efficacy of this topical maintenance therapy was measured with the occurrence of symptomatic recurrences during the period of prophylaxis and 6 months after. We also studied the side effects of oral fluconazole and topical boric acid treatment. 3 patients of the 24 (12,5%) were excluded from the study because interruption of the maintenance therapy. During the period of the maintenance therapy recurrent infection was not occurred among 18 patients of the remaining 21 (86%), although 3 patients (14%) experienced symptomatic fungal vaginitis. 7 patients fulfilled the 6 months after completing the period of topical boric acid prophylaxis. During this 6 months 2 patients of this 7 (29%) had acute episode, the remaining 5 (71%) did not experienced symptomatic infection. Side effects were not mentioned during the study. Topical boric acid seems to be an effective maintenance therapy in the prevention of relapses of recurrent vulvovaginal candidiasis.

Country of Publication: Hungary

Publisher: Magyar Noovos Tarsasag

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 86386-73-4 (fluconazole)

Publication Type: Journal: Article

Subject Headings:
article
clinical article
drug efficacy
female
human
maintenance therapy
prophylaxis
"recurrent infection/dt [Drug Therapy]"
relapse
"side effect/si [Side Effect]"
"*vagina candidiasis/dt [Drug Therapy]"
vaginitis
"antifungal agent/dt [Drug Therapy]"
"antifungal agent/po [Oral Drug Administration]"
"*boric acid/ae [Adverse Drug Reaction]"
"*boric acid/dt [Drug Therapy]"
"*boric acid/tp [Topical Drug Administration]"
"*fluconazole/ae [Adverse Drug Reaction]"
"*fluconazole/dt [Drug Therapy]"
"*fluconazole/po [Oral Drug Administration]"

Source: EMBASE

150. Boric acid susceptibility testing of non-C. albicans Candida and Saccharomyces cerevisiae: Comparison of three methods

Citation: Medical Mycology, 2002, vol./is. 40/3(319-322), 1369-3786 (2002)

Author(s): Otero L.; Palacio V.; Mendez F.J.; Vazquez F.

Institution: (Otero, Palacio, Mendez, Vazquez) Departamento de Biologia Funcional, Area de Microbiologia, Facultad de Medicina, C/ Julian Claveria s/n, 33006 Oviedo, Spain

Language: English

Abstract: To establish the best method for boric acid susceptibility testing, we compared two agar dilution methods (high and low inoculum) and a standard broth microdilution method (from the National Committee for Clinical Laboratory Standards document NCCLS M-27A). Saccharomyces cerevisiae (37) and non-C. albicans Candida (39) isolates, as well as one isolate of Trichosporon sp., were included. All were isolated from female workers with vulvovaginitis. Good agreement within a fourfold dilution range was found between the three methods, and only the broth microdilution method versus the agar dilution method with high inoculum showed significant discrepancies. Reading results was easier with the broth microdilution method than with the agar dilution methods because of partial growth inhibition in the latter. In conclusion, broth microdilution is a suitable method for testing yeast susceptibility to boric acid.

Country of Publication: United Kingdom

Publisher: BIOS Scientific Publishers Ltd.

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid)

Publication Type: Journal: Article

Subject Headings:
agar dilution
agar medium
article
broth microdilution
*Candida
Candida glabrata

Candida parapsilosis
comparative study
data analysis
dilution
drug sensitivity
female
female worker
fungus growth
fungus isolation
growth inhibition
human
in vitro study
inoculation
intermethod comparison
minimum inhibitory concentration
nonhuman
*Saccharomyces cerevisiae
standard
Trichosporon
vulvovaginitis
"*boric acid/dv [Drug Development]"

Source: EMBASE

151. Vaginitis due to Candida krusei: epidemiology, clinical aspects, and therapy.

Citation: Clinical infectious diseases : an official publication of the Infectious Diseases Society of America, Nov 2002, vol. 35, no. 9, p. 1066-1070, 1537-6591 (November 1, 2002)

Author(s): Singh, Shivani; Sobel, Jack D; Bhargava, Pallavi; Boikov, Dina; Vazquez, Jose A

Abstract: Twelve women with vaginal Candida krusei infection were evaluated. In vitro antifungal susceptibility testing and molecular typing were performed. Patients infected with C. krusei frequently had refractory vulvovaginal signs and symptoms that were otherwise indistinguishable from vaginitis due to other yeasts. Patients were 32-63 years old and had previously received multiple courses of antimycotic agents, including fluconazole and miconazole. The most active azole in vitro was clotrimazole, with a 90% minimum inhibitory concentration of 0.25 microg/mL. Four of 6 patients treated with boric acid had clinical and mycological cure. Two dominant genotypes of C. krusei were identified via contour-clamped homogenous electrical field analysis. No major genotypic change was observed in successive isolates from the same patient in most cases, suggesting that these refractory cases were relapses. C. krusei is a rare but important cause of refractory vaginitis and is unique because of its intrinsic resistance to fluconazole.

Subject Headings: Vaginitis
Treatment Outcome
Genotype
Antifungal Agents
Humans
Index Medicus
Karyotyping
Adult
Female
Middle Aged
Candida
Microbial Sensitivity Tests

Source: Medline

Full Text: Available from *EBSCOhost* in *Clinical Infectious Diseases*
Available from *UHB Online* in *Clinical Infectious Diseases*; Note: ; Notes: Click on 'Sign in via OpenAthens' and enter login credentials

152. Vaginitis due to Candida krusei: Epidemiology, clinical aspects, and therapy

Citation: Clinical Infectious Diseases, November 2002, vol./is. 35/9(1066-1070), 1058-4838 (01 Nov 2002)

Author(s): Singh S.; Sobel J.D.; Bhargava P.; Boikov D.; Vazquez J.A.

Institution: (Singh, Sobel, Bhargava, Boikov, Vazquez) Div. of Infectious Diseases, Harper University Hospital, 4 Brush Ctr., 3390 John R. Rd, Detroit, MI 48201, United States

Language: English

Abstract: Twelve women with vaginal Candida krusei infection were evaluated. In vitro antifungal susceptibility testing and molecular typing were performed. Patients infected with C. krusei frequently had refractory vulvovaginal signs and symptoms that were otherwise indistinguishable from vaginitis due to other yeasts. Patients were 32-63 years old and had previously received multiple courses of antimycotic agents, including fluconazole and miconazole. The most active azole in vitro was clotrimazole, with a 90% minimum inhibitory concentration of 0.25 mug/mL. Four of 6 patients treated with boric acid had clinical and mycological cure. Two dominant genotypes of C. krusei were identified via contour-clamped homogenous electrical field analysis. No major genotypic change was observed in successive isolates from the same patient in most cases, suggesting that these refractory cases were relapses. C. krusei is a rare but important cause of refractory vaginitis and is unique because of its intrinsic resistance to fluconazole.

Country of Publication: United States

Publisher: University of Chicago Press

CAS Registry Number: 1397-89-3 (amphotericin B); 30652-87-0 (amphotericin B); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 189768-38-5 (caspofungin); 23593-75-1 (clotrimazole); 86386-73-4 (fluconazole); 2022-85-7 (flucytosine); 84625-61-6 (itraconazole); 65277-42-1 (ketoconazole); 22916-47-8 (miconazole); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin); 137234-62-9 (voriconazole)

Publication Type: Journal: Article

Subject Headings:

adult
article
candida krusei
clinical article
drug sensitivity
electric field
female
fungus isolation
genotype
human
minimum inhibitory concentration
molecular typing
priority journal
relapse
symptomatology
"*vagina candidiasis/di [Diagnosis]"
"*vagina candidiasis/dt [Drug Therapy]"
"*vagina candidiasis/ep [Epidemiology]"
"amphotericin B/cm [Drug Comparison]"
"amphotericin B/dt [Drug Therapy]"
"amphotericin B/tp [Topical Drug Administration]"
"*antifungal agent/cm [Drug Comparison]"
"*antifungal agent/dt [Drug Therapy]"
"boric acid/dt [Drug Therapy]"
"caspofungin/cm [Drug Comparison]"
"clotrimazole/cm [Drug Comparison]"
"clotrimazole/tp [Topical Drug Administration]"
"fluconazole/cm [Drug Comparison]"
"fluconazole/dt [Drug Therapy]"

"flucytosine/dt [Drug Therapy]"
"flucytosine/tp [Topical Drug Administration]"
"itraconazole/cm [Drug Comparison]"
"itraconazole/dt [Drug Therapy]"
"ketoconazole/dt [Drug Therapy]"
"miconazole/cm [Drug Comparison]"
"miconazole/dt [Drug Therapy]"
"nystatin/dt [Drug Therapy]"
"nystatin/tp [Topical Drug Administration]"
"pyrrole derivative/cm [Drug Comparison]"
"voriconazole/cm [Drug Comparison]"

Source: EMBASE

Full Text: Available from *EBSCOhost* in *Clinical Infectious Diseases*
Available from *UHB Online* in *Clinical Infectious Diseases*; Note: ; Notes: Click on 'Sign in via OpenAthens' and enter login credentials

153. Otomycosis in Turkey: predisposing factors, aetiology and therapy.

Citation: The Journal of laryngology and otology, Jan 2003, vol. 117, no. 1, p. 39-42, 0022-2151 (January 2003)

Author(s): Ozcan, K Murat; Ozcan, Muge; Karaarslan, Aydin; Karaarslan, Filiz

Abstract: Otomycosis usually requires long-term treatment and tends to recur. This study was performed on 87 patients with the clinical diagnosis of otomycosis and 20 controls in order to determine the pathogenic agents, predisposing factors and a cost-effective treatment. The predisposing factors included wearing head clothes (74.7 per cent), presence of dermatomycoses (34.5 per cent) and swimming (27.6 per cent). The most common pathogenic fungus was Aspergillus niger (44.8 per cent) in the otomycosis group. The only isolate was Candida albicans in the control group (2.5 per cent). We concluded that administration of four per cent boric acid solution in alcohol and frequent suction cleaning of the ear canal might be a cost-effective treatment for otomycosis since 77 per cent of the patients were treated effectively this way. Eighty per cent of the resistant cases had mixed fungal-bacterial infections, and 50 per cent of them had dermatomycoses. These resistant cases were treated by administration of tioconazole ointment.

Subject Headings: Turkey
Male
Adolescent
Ear Diseases
Bacterial Infections
Index Medicus
Antifungal Agents
Risk Factors
Humans
Aged 80 and over
Adult
Female
Middle Aged
Boric Acids
Abridged Index Medicus
Aged
Mycoses
Age Distribution

Source: Medline

Full Text: Available from *ProQuest* in *Journal of Laryngology and Otology, The*

154. Vulvovaginal trichosporonosis

Citation: Infectious Diseases in Obstetrics and Gynecology, 2003, vol./is. 11/2(131-133), 1064-7449 (2003)

Author(s): Makela P.; Leaman D.; Sobel J.D.

Institution: (Makela) Department of Obstetrics, Wayne Stt. Univ. School of Medicine, Detroit, MI, United States; (Leaman, Sobel) Division of Infectious Disease, Wayne Stt. Univ. School of Medicine, Detroit, MI, United States; (Makela) 4707 St Antoine, Detroit, MI 48201, United States

Language: English

Abstract: Objective: Isolation of Trichosporon species from vaginal secretions is a rare event, and no data are available on its pathogenic role. A case series is presented to determine the pathogenic role of Trichosporon species in vulvovaginal infections. Methods: We performed a retrospective chart review of patients seen in the W.S.U. Vaginitis Clinic in order to identify patients from whom Trichosporon species were isolated. Results: Between 1986 and 2001, a total of 13 patients had a total of 18 positive vaginal cultures for Trichosporon species. All 18 vaginal isolates were T. inkin. In general, positive vaginal cultures were accompanied by low yeast colony counts. Four out of 18 positive T. inkin cultures were obtained from visits by asymptomatic patients. Of the remaining 14 positive T. inkin cultures from patients with symptoms, nine out of 14 cultures had other diagnoses (Candida albicans, six cases; bacterial vaginosis, two cases; Trichomonas, one case). Five positive T. inkin cultures were obtained from visits at which patients had symptoms and no associated diagnosis. In only one of the five episodes could we establish a clear pathogenic role for Trichosporon. In this case the patient was treated with boric acid and had resolution of symptoms and a negative culture at follow-up. In-vitro susceptibility tests revealed that T. inkin was resistant to flucytosine and susceptible to all topical and oral azoles. Conclusions: T. inkin is occasionally found in vulvovaginal cultures and is usually a non-pathogen. Transient colonization tended to occur in women, usually of African-American origin, with major perturbations in vaginal flora (bacterial vaginosis and trichomoniasis) and increased pH. Pathogenic consequences of Trichosporon colonization appear to be rare.

Country of Publication: United Kingdom

Publisher: Taylor and Francis Ltd.

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 23593-75-1 (clotrimazole); 86386-73-4 (fluconazole); 2022-85-7 (flucytosine); 84625-61-6 (itraconazole); 65277-42-1 (ketoconazole); 22916-47-8 (miconazole); 137234-62-9 (voriconazole)

Publication Type: Journal: Review

Subject Headings:
adult
alkalinity
antibiotic resistance
Candida albicans
clinical article
female
follow up
fungus culture
fungus isolation
human
medical record
"*mycosis/di [Diagnosis]"
"*mycosis/dt [Drug Therapy]"
"*mycosis/et [Etiology]"
negro
nonhuman
priority journal
retrospective study
review
risk factor

symptom
Trichomonas
*Trichosporon
*trichosporon inkin
United States
vagina flora
"*vaginitis/di [Diagnosis]"
"*vaginitis/dt [Drug Therapy]"
"*vaginitis/et [Etiology]"
"*boric acid/dt [Drug Therapy]"
clotrimazole
fluconazole
flucytosine
itraconazole
ketoconazole
miconazole
"pyrrole derivative/po [Oral Drug Administration]"
"pyrrole derivative/tp [Topical Drug Administration]"
voriconazole

Source: EMBASE

Full Text: Available from *EBSCOhost* in *Infectious Diseases in Obstetrics & Gynecology*
Available from *ProQuest* in *Infectious Diseases in Obstetrics and Gynecology*
Available from *National Library of Medicine* in *Infectious Diseases in Obstetrics and Gynecology*

155. Otomycosis in Turkey: Predisposing factors, aetiology and therapy

Citation: Journal of Laryngology and Otology, January 2003, vol./is. 117/1(39-42), 0022-2151 (01 Jan 2003)

Author(s): Ozcan K.M.; Ozcan M.; Karaarslan A.; Karaarslan F.

Institution: (Karaarslan) Dept. of Otolaryngology/Dermatol., Ankara Numune Educ. and Res. Hosp., Ankara, Turkey; (Karaarslan) Department of Microbiology, Ankara Univ. Faculty of Medicine, Ankara, Turkey; (Ozcan) Yucetepe sit. A blok. 59/6, 06580 Anittepe, Ankara, Turkey

Language: English

Abstract: Otomycosis usually requires long-term treatment and tends to recur. This study was performed on 87 patients with the clinical diagnosis of otomycosis and 20 controls in order to determine the pathogenic agents, predisposing factors and a cost-effective treatment. The predisposing factors included wearing head clothes (74.7 per cent), presence of dermatomycoses (34.5 per cent) and swimming (27.6 per cent). The most common pathogenic fungus was Aspergillus niger (44.8 per cent) in the otomycosis group. The only isolate was Candida albicans in the control group (2.5 per cent). We concluded that administration of four per cent boric acid solution in alcohol and frequent suction cleaning of the ear canal might be a cost-effective treatment for otomycosis since 77 per cent of the patients were treated effectively this way. Eighty per cent of the resistant cases had mixed fungal-bacterial infections, and 50 per cent of them had dermatomycoses. These resistant cases were treated by administration of tioconazole ointment.

Country of Publication: United Kingdom

Publisher: Royal Society of Medicine Press Ltd

CAS Registry Number: 64-17-5 (alcohol); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 61675-64-7 (tioconazole); 65899-73-2 (tioconazole)

Publication Type: Journal: Article

Subject Headings: adolescent
adult
aged

article
Aspergillus niger
Candida albicans
clothing
controlled study
cost effectiveness analysis
dermatomycosis
disease predisposition
female
human
major clinical study
male
"*mycosis/dt [Drug Therapy]"
"*mycosis/et [Etiology]"
"*mycosis/th [Therapy]"
"*otomycosis/dt [Drug Therapy]"
"*otomycosis/et [Etiology]"
"*otomycosis/th [Therapy]"
swimming
Turkey (republic)
*alcohol
*boric acid
"*tioconazole/dt [Drug Therapy]"

Source: EMBASE

Full Text: Available from *ProQuest* in *Journal of Laryngology and Otology, The*

156. Phenotypic diversity of oral C. albicans isolated on single and sequential visits in an HIV-infected Chinese cohort

Citation: APMIS, February 2003, vol./is. 111/2(329-337), 0903-4641 (01 Feb 2003)

Author(s): Samaranayake Y.H.; Samaranayake L.P.; Yau J.Y.Y.; Dassanayake R.S.; Li T.K.L.; Anil S.

Institution: (Samaranayake, Samaranayake, Yau, Dassanayake, Anil) Oral Bio-sciences, University of Hong Kong, Hong Kong, Hong Kong; (Li) Oral Diagnosis, Faculty of Dentistry, University of Hong Kong, Hong Kong, Hong Kong; (Samaranayake) Oral Bio-sciences, Faculty of Dentistry, University of Hong Kong, Hong Kong, Hong Kong

Language: English

Abstract: HIV-infected individuals maintain multiple oral C. albicans strains over time that are thought to undergo microevolution in terms of both phenotypic and genotypic features. To study this phenomenon, a 12-month prospective study was conducted in a cohort of 16 HIV-infected ethnic Chinese individuals with (A) and without (B) symptoms of oropharyngeal candidiasis to evaluate the phenotype distribution among oral C. albicans isolates during disease progression. Oral rinse samples were obtained and up to five C. albicans colony-forming units were selected per each visit, during the one year period of multiple visits. The isolates were phenotyped using two commercially available biotyping kits, the API 20C system, API ZYM system, and a plate test for resistance to boric acid. A total of 261 C. albicans strains in group A were differentiated into 67 biotypes, while 42 biotypes were seen amongst the 182 isolates from group B. The major biotypes in the two groups were similar and were in decreasing order of prevalence J1R, J1S, J6S, J6R, J2S, K1S, J10R, K1R, and K6R; 48 different biotypes were seen in group A and 24 in group B, with some uniquely represented in each group, leading to a significant association between the prevalence of the biotypes J1S and J2S and symptomatic candidiasis ($p<0.05$). Taken together this study illustrates the wide phenotypic spectrum of oral C. albicans associated with HIV-infection.

Country of Publication: Denmark

Publisher: Blackwell Munksgaard

Publication Type: Journal: Article

Subject Headings: adult

article
biotype
Candida albicans
"*candidiasis/et [Etiology]"
China
clinical article
clinical feature
cohort analysis
colony forming unit
controlled study
disease course
ethnology
female
fungal genetics
fungus isolation
genotype
human
*Human immunodeficiency virus infection
male
*microbial diversity
*mouth flora
oropharynx
*phenotype
prevalence
priority journal

Source: EMBASE

Full Text: Available from *EBSCOhost* in *APMIS*

157. Common complementary and alternative therapies for yeast vaginitis and bacterial vaginosis: A systematic review

Citation: Obstetrical and Gynecological Survey, May 2003, vol./is. 58/5(351-358), 0029-7828 (01 May 2003)

Author(s): Van Kessel K.; Assefi N.; Marrazzo J.; Eckert L.

Institution: (Van Kessel, Eckert) Department of Obstetrics, University of Washington, Harborview Medical Center, 325 9th Avenue, Seattle, WA 98104, United States; (Assefi) Dept. of General Internal Medicine, University of Washington, Harborview Medical Center, Seattle, WA, United States; (Marrazzo) Department of Medicine, University of Washington, Harborview Medical Center, Seattle, WA, United States

Language: English

Abstract: This article is a systematic review of the literature regarding the most commonly used complementary and alternative medicine (CAM) therapies for yeast vaginitis and bacterial vaginosis. A search was conducted of all published literature on conventional search engines (PubMed, EMBASE, the Cochrane Registry, CINAHL, LILACS) and alternative medicine databases (Natural Medicines Comprehensive Database, Longwood Herbal Taskforce, and Alternative Medicine Alert), for all studies of the five most commonly used CAM treatments of vaginitis. Inconsistencies in definition of vaginitis, type of intervention, control groups, and outcomes prevented performance of a meta-analysis, and paucity of high-quality studies made ranking by evidence-based scales unsuitable. Lactobacillus recolonization (via yogurt or capsules) shows promise for the treatment of both yeast vaginitis and bacterial vaginosis with little potential for harm. Boric acid can be recommended to women with recurrent vulvovaginal Candidal infections who are resistant to conventional therapies, but can occasionally cause vaginal burning. Because of associated risks in the absence of well-documented clinical benefits, douching remains a practice that should not be recommended for the treatment of vaginitis. Finally, tea tree oil and garlic show some in vitro potential for the treatment of vaginitis, but the lack of in vivo studies preclude their recommendation to patients for the time-being. The available evidence for CAM treatments of vaginitis is of poor quality

despite the prevalent use of these therapies. Well-designed randomized, controlled trials investigating the efficacy and safety of these therapies for vaginitis are needed before any reliable clinical recommendations can be made.

Country of Publication: United States

Publisher: Lippincott Williams and Wilkins

CAS Registry Number: 539-86-6 (allicin); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 1400-61-9 (nystatin); 34786-70-4 (nystatin); 62997-67-5 (nystatin)

Publication Type: Journal: Review

Subject Headings:
*alternative medicine
bibliographic database
Cinahl
clinical trial
Cochrane Library
"diarrhea/si [Side Effect]"
Embase
evidence based medicine
"flatulence/si [Side Effect]"
"gastrointestinal symptom/si [Side Effect]"
"heartburn/si [Side Effect]"
herbal medicine
human
Lactobacillus acidophilus
lilacs database
Medline
"nausea/si [Side Effect]"
review
"skin allergy/si [Side Effect]"
"skin irritation/si [Side Effect]"
"vagina candidiasis/dt [Drug Therapy]"
"vagina candidiasis/et [Etiology]"
"*vaginitis/dt [Drug Therapy]"
"*vaginitis/et [Etiology]"
"vulvovaginitis/dt [Drug Therapy]"
"vulvovaginitis/et [Etiology]"
allicin
"*boric acid/ct [Clinical Trial]"
"*boric acid/dt [Drug Therapy]"
"*boric acid/va [Intravaginal Drug Administration]"
"*garlic extract/ae [Adverse Drug Reaction]"
"*garlic extract/dt [Drug Therapy]"
"nystatin/dt [Drug Therapy]"
placebo
"*tea tree oil/ae [Adverse Drug Reaction]"
"*tea tree oil/dt [Drug Therapy]"
"*yoghurt/ae [Adverse Drug Reaction]"
"*yoghurt/ct [Clinical Trial]"
"*yoghurt/dt [Drug Therapy]"
"*yoghurt/va [Intravaginal Drug Administration]"
"*yoghurt/po [Oral Drug Administration]"
"*yoghurt/tp [Topical Drug Administration]"

Source: EMBASE

158. Treatment of vaginitis caused by Candida glabrata: Use of topical boric acid and flucytosine

Citation: American Journal of Obstetrics and Gynecology, November 2003, vol./is. 189/5(1297-1300), 0002-9378 (November 2003)

Author(s): Sobel J.D.; Chaim W.; Nagappan V.; Leaman D.

Institution: (Sobel, Nagappan, Leaman) Division of Infectious Diseases, Wayne State Univ. School of Medicine, Detroit, MI, United States; (Chaim) Dept. of Obstetrics and Gynecology, Ben Gurion University, Beer Sheva, Israel; (Sobel) Division of Infectious Diseases, Harper Hospital, 3990 John R, Detroit, MI 48201, United States

Language: English

Abstract: OBJECTIVE: The purpose of this study was to review the treatment outcome and safety of topical therapy with boric acid and flucytosine in women with Candida glabrata vaginitis. STUDY DESIGN: This was a retrospective review of case records of 141 women with positive vaginal cultures of C glabrata at two sites, Wayne State University School of Medicine and Ben Gurion University. RESULTS: The boric acid regimen, 600 mg daily for 2 to 3 weeks, achieved clinical and mycologic success in 47 of 73 symptomatic women (64%) in Detroit and 27 of 38 symptomatic women (71%) in Beer Sheba. No advantage was observed in extending therapy for 14 to 21 days. Topical flucytosine cream administered nightly for 14 days was associated with a successful outcome in 27 of 30 of women (90%) whose condition had failed to respond to boric acid and azole therapy. Local side effects were uncommon with both regimens. CONCLUSIONS: Topical boric acid and flucytosine are useful additions to therapy for women with azolerefractory C glabrata vaginitis.

Country of Publication: United States

Publisher: Mosby Inc.

CAS Registry Number: 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 2022-85-7 (flucytosine)

Publication Type: Journal: Review

Subject Headings:
adolescent
adult
aged
*Candida glabrata
drug safety
female
fungus culture
human
major clinical study
nonhuman
priority journal
retrospective study
review
"side effect/si [Side Effect]"
symptomatology
treatment outcome
"*vaginitis/dt [Drug Therapy]"
"*vaginitis/et [Etiology]"
"*boric acid/ae [Adverse Drug Reaction]"
"*boric acid/dt [Drug Therapy]"
"*boric acid/tp [Topical Drug Administration]"
"*flucytosine/ae [Adverse Drug Reaction]"
"*flucytosine/dt [Drug Therapy]"
"*flucytosine/tp [Topical Drug Administration]"

Source: EMBASE

159. [Up to date in sexually transmitted infections: epidemiology, diagnostic approaches and treatments].

Citation: Enfermedades infecciosas y microbiología clínica, Aug 2004, vol. 22, no. 7, p. 392-411, 0213-005X (2004 Aug-Sep)

Author(s): Vázquez, Fernando; Otero, Luis; Ordás, José; Junquera, María Luisa; Varela, José Antonio

Abstract: In the last years, there have been important advances in sexually transmitted infections such as genome sequencing of Treponema pallidum, Chlamydia trachomatis or Mycoplasma genitalium; the new taxonomic position of Calymmatobacterium granulomatis; commercial diagnostic systems based on nucleic acid amplification; the emergence of quinolone resistance in Neisseria gonorrhoeae; new therapeutic approaches in vulvovaginal candidiasis that include boric acid; the demonstration that valacyclovir reduces the risk of transmission of genital herpes or the availability of immune-response modifier in the treatment of genital warts, and that are questions in the goal of this review. Viral hepatitis and HIV were no reviewed by space reasons.

Subject Headings: Sexually Transmitted Diseases
Humans
Index Medicus

Source: Medline

160. Up to date in sexually transmitted infections: Epidemiology, diagnostic approaches and treatments [Spanish]
Actualizacion en infecciones de transmision sexual: Epidemiologia, diagnostico y tratamiento

Original Title: Actualizacion en infecciones de transmision sexual: Epidemiologia, diagnostico y tratamiento

Citation: Enfermedades Infecciosas y Microbiologia Clinica, August 2004, vol./is. 22/7(392-411), 0213-005X (August/September 2004)

Author(s): Vazquez F.; Otero L.; Ordas J.; Junquera M.L.; Varela J.A.

Institution: (Vazquez) Hospital Monte Naranco, Departamento de Biologia Funcional, Facultad de Medicina, Oviedo, Spain; (Otero) Servicio de Microbiologia, Hospital de Cabuenes, Gijon, Spain; (Ordas) Servicio de Microbiologia, Hospital Central de Asturias, Oviedo, Spain; (Junquera) Serv. de Dermatologia y Venereologia, Unidad de ITS, Hospital Monte Naranco, Oviedo, Spain; (Varela) Serv. de Dermatologia y Venereologia, Unidad de ITS, Ambulatorio de Pumarin, Gijon, Spain; (Vazquez) Departamento de Biologia Funcional, Area de Microbiologia, Facultad de Medicina, Julian Claveria, s/n, 33006 Oviedo, Spain

Language: Spanish

Abstract: In the last years, there have been important advances in sexually transmitted infections such as genome sequencing of Treponema pallidum, Chlamydia trachomatis or Mycoplasma genitalium; the new taxonomic position of Calymmatobacterium granulomatis, commercial diagnostic systems based on nucleic acid amplification; the emergence of quinolone resistance in Neisseria gonorrhoeae; new therapeutic approaches in vulvovaginal candidiasis that include boric acid; the demonstration that valacyclovir reduces the risk of transmission of genital herpes or the availability of immune-response modifier in the treatment of genital warts, and that are questions in the goal of this review. Viral hepatitis and HIV were no reviewed by space reasons.

Country of Publication: Spain

Publisher: Ediciones Doyma, S.L.

CAS Registry Number: 59277-89-3 (aciclovir); 26787-78-0 (amoxicillin); 34642-77-8 (amoxicillin); 61336-70-7 (amoxicillin); 83905-01-5 (azithromycin); 10043-35-3 (boric acid); 11113-50-1 (boric acid); 11129-12-7 (boric acid); 14213-97-9 (boric acid); 79350-37-1 (cefixime); 73384-59-5 (ceftriaxone); 74578-69-1 (ceftriaxone); 11111-12-9 (cephalosporin); 134-90-7 (chloramphenicol); 2787-09-9 (chloramphenicol); 56-75-7 (chloramphenicol); 113852-37-2 (cidofovir); 85721-33-1 (ciprofloxacin); 10592-13-9 (doxycycline); 17086-28-1 (doxycycline); 564-25-0 (doxycycline); 114-07-8 (erythromycin); 70536-18-4 (erythromycin); 109545-84-8 (evernimicin); 104227-87-4 (famciclovir); 112811-59-3 (gatifloxacin); 180200-66-2 (gatifloxacin); 556-50-3 (glycylglycine); 100986-85-4 (levofloxacin); 138199-71-0 (levofloxacin); 165800-03-3 (linezolid); 82419-36-1 (ofloxacin); 146836-84-2 (trovafloxacin); 124832-26-4 (valaciclovir)

Publication Type: Journal: Review

Subject Headings: antibiotic resistance
antibiotic sensitivity

bacterial genome
bacterium culture
calymmatobacterium granulomatis
Chlamydia trachomatis
"condyloma/dt [Drug Therapy]"
female
gene sequence
"genital herpes/et [Etiology]"
"gonorrhea/dr [Drug Resistance]"
"gonorrhea/et [Etiology]"
"herpes/di [Diagnosis]"
"herpes/dt [Drug Therapy]"
"herpes/et [Etiology]"
human
Mycoplasma genitalium
Neisseria gonorrhoeae
nucleic acid amplification
review
"*sexually transmitted disease/di [Diagnosis]"
"*sexually transmitted disease/dr [Drug Resistance]"
"*sexually transmitted disease/dt [Drug Therapy]"
"*sexually transmitted disease/ep [Epidemiology]"
"*sexually transmitted disease/et [Etiology]"
"syphilis/di [Diagnosis]"
"syphilis/dt [Drug Therapy]"
"syphilis/et [Etiology]"
Treponema pallidum
"vagina candidiasis/dt [Drug Therapy]"
virus transmission
"aciclovir/dt [Drug Therapy]"
"aminoglycoside antibiotic agent/dt [Drug Therapy]"
"amoxicillin/do [Drug Dose]"
"amoxicillin/dt [Drug Therapy]"
"amoxicillin/po [Oral Drug Administration]"
"*antibiotic agent/do [Drug Dose]"
"*antibiotic agent/dt [Drug Therapy]"
"*antibiotic agent/po [Oral Drug Administration]"
"*antivirus agent/dt [Drug Therapy]"
"azithromycin/do [Drug Dose]"
"azithromycin/dt [Drug Therapy]"
"azithromycin/po [Oral Drug Administration]"
"boric acid/dt [Drug Therapy]"
"cefixime/dt [Drug Therapy]"
"ceftriaxone/do [Drug Dose]"
"ceftriaxone/dt [Drug Therapy]"
"ceftriaxone/iv [Intravenous Drug Administration]"
"ceftriaxone/cj [Subconjunctival Drug Administration]"
"cephalosporin/dt [Drug Therapy]"
"chloramphenicol/dt [Drug Therapy]"
"cidofovir/dt [Drug Therapy]"
"ciprofloxacin/dt [Drug Therapy]"
"doxycycline/do [Drug Dose]"
"doxycycline/dt [Drug Therapy]"
"doxycycline/po [Oral Drug Administration]"
"erythromycin/do [Drug Dose]"
"erythromycin/dt [Drug Therapy]"
"erythromycin/po [Oral Drug Administration]"
"evernimicin/dt [Drug Therapy]"
"famciclovir/dt [Drug Therapy]"
"gatifloxacin/dt [Drug Therapy]"

"glycylglycine/dt [Drug Therapy]"
"interferon/dt [Drug Therapy]"
"levofloxacin/dt [Drug Therapy]"
"linezolid/dt [Drug Therapy]"
"ofloxacin/dt [Drug Therapy]"
"penicillin derivative/dt [Drug Therapy]"
quinoline derived antiinfective agent
"sulfonamide/dt [Drug Therapy]"
"tetracycline derivative/dt [Drug Therapy]"
"trovafloxacin/dt [Drug Therapy]"
unindexed drug
"valaciclovir/dt [Drug Therapy]"

Source: EMBASE

161. Phospholipase, proteinase and haemolytic activities of Candida albicans isolated from oral cavities of patients with type 2 diabetes mellitus.

Citation: Journal of medical microbiology, Oct 2007, vol. 56, p. 1393-1398, 0022-2615 (October 2007)

Author(s): Tsang, C S P; Chu, F C S; Leung, W K; Jin, L J; Samaranayake, L P; Siu, S C

Abstract: The aim of this study was to biotype and characterize phospholipase, proteinase and haemolytic activities of oral Candida albicans isolates from 210 Chinese patients with type 2 diabetes mellitus (DM) and 210 age- and sex-matched healthy controls. Seventy-six and 50 C. albicans isolates were obtained from type 2 DM patients and controls, respectively, using the oral rinse technique. The isolates were characterized with a biotyping system based on enzyme profiles, carbohydrate assimilation patterns and boric acid resistance of the yeasts, and the isolates were further tested for in vitro phospholipase, proteinase and haemolytic activities. The major biotypes of C. albicans isolates from the type 2 DM and control groups were A1R (42.1 %) and J1R (36.0 %), respectively. Significantly higher proteinase and haemolytic activities were found in the isolates from the type 2 DM group (P<0.05). Proteinase activity was higher in isolates from patients with > or =10 years of DM history than those with <10 years (P<0.05). Haemolytic activity was significantly higher in isolates from female DM patients than in those from male counterparts (P<0.05). These data provide evidence of increased extracellular enzyme activity in Candida isolates taken from DM patients.

Subject Headings:
Case-Control Studies
Candida albicans
Hemolysin Proteins
Middle Aged
Humans
Candidiasis
Index Medicus
Phospholipases
China
Adult
Female
Mouth
Mycological Typing Techniques
Aged
Peptide Hydrolases
Male
Diabetes Mellitus Type 2

Source: Medline

162. Local treatment of vulvovaginal candidosis : general and practical considerations.

Citation: Drugs, Jan 2008, vol. 68, no. 13, p. 1787-1802, 0012-6667 (2008)

Author(s): das Neves, José; Pinto, Eugénia; Teixeira, Branca; Dias, Gustavo; Rocha, Patrocínia; Cunha, Teresa; Santos, Bárbara; Amaral, Maria H; Bahia, Maria F

Abstract: Vulvovaginal candidosis is a common worldwide female medical problem, occurring mostly in women of childbearing age. Currently available options for the treatment of this condition include local and oral (systemic) therapy. Both alternatives have been considered equally effective in the treatment of uncomplicated vulvovaginal candidosis, although oral regimens are often preferred by physicians and women. However, local treatment presents several advantageous and unique features that may favour this therapeutic approach. The availability of numerous antifungal drugs and products for topical administration makes the selection quite challenging as this task is mostly based on personal experience or anecdotal data. Also, recent advances have been made in topical antifungal formulations and there is an increasing availability of over-the-counter products. Therefore, a review of both general and practical considerations related to the local treatment of vulvovaginal candidosis is timely.In summary, azoles and short-term regimens are usually recommended for the local treatment of vulvovaginal candidosis, with nystatin and boric acid considered as second-line alternatives. Unconventional approaches may also be regarded as suitable in patients refractory to usual treatments. In addition to the susceptibility of implicated Candida spp. to the antifungal agents, this choice should take into consideration other important issues such as particular situations (e.g. pregnancy, menopause, drug hypersensitivity), women's preferences, and the availability, particularities and cost of antifungal formulations.

Subject Headings:
Antifungal Agents
Candidiasis Vulvovaginal
Humans
Administration Topical
Female
Candida
Index Medicus
Nonprescription Drugs

Source: Medline

Full Text:
Available from *EBSCOhost* in *Drugs*
Available from *Springer NHS Pilot 2014 (NESLi2)* in *Drugs*; Note: ; Collection notes: Academic-License. Please when asked to pick an institution please pick NHS. Please also note access is from 1997 to date only.
Available from *ProQuest* in *Drugs*
Available from *EBSCOhost* in *Drugs*

163. Biotypes, genotypes and ketoconazole susceptibility of Candida albicans isolates from a group of Thai AIDS patients.

Citation: The new microbiologica, Jul 2008, vol. 31, no. 3, p. 409-416, 1121-7138 (July 2008)

Author(s): Teanpaisan, Rawee; Niyombandith, Mali; Pripatnanant, Prisana; Sattayasanskul, Wilad

Abstract: A total of eighty-seven Candida albicans isolates from a group of Thai AIDS patients were characterized for phenotypic and genotypic profiles and antifungal susceptibility to ketoconazole. Phenotyping of the isolates was carried out by a biotyping method based on the enzyme profiles, carbohydrate assimilation patterns and boric acid resistance of the yeasts. Genotyping was performed through randomly amplified polymorphic DNA (RAPD) analysis. Antifungal susceptibility of ketoconazole was performed using the NCCLS broth microdilution method. Combination of the biotypic tests revealed a total of 49 different biotypes. The most predominant was A1S (31%), the remaining biotypes represented only few isolates in each. RAPD profiles identified 14 clusters of genotype among the 87 isolates. Almost every individual harboured his/her own specific isolate and in 25 of 26 (96.2%) harboured more than one clonal type. The heterogeneity of both phenotypic and genotypic profiles of C. albicans isolates in this study was similar to previous reports from other oral sources in different geographic areas. All isolates were susceptible to ketoconazole. The findings may be useful as baseline information of oral C. albicans colonization in Thai population living in the south of Thailand.

Subject Headings:
Genotype
Candida albicans
Antifungal Agents
Humans
Microbial Sensitivity Tests
Ketoconazole
Polymerase Chain Reaction
Thailand
Mycological Typing Techniques
Index Medicus
Acquired Immunodeficiency Syndrome

Source: Medline

164. [Evaluation of biotyping of medically important Candida spp].

Citation: Klinická mikrobiologie a infekční lékařství, Aug 2009, vol. 15, no. 4, p. 116-124, 1211-264X (August 2009)

Author(s): Hamal, Petr; Koukalová, Dagmar

Abstract: The biotyping system according to Odds and Abbott belongs to the most frequently used phenotypic methods. The aim of the study was to evaluate its discriminatory power in our laboratory. In addition, biotypes of isolates obtained from various body locations, present in defined age groups of patients and in males and females were also compared. A total of 343 clinical isolates were typed belonging to six most frequent Candida spp. Nine types of tests for biotyping were prepared: sorbose, citrate and urea assimilation, tolerance to pH 1.4, pH 1.55 and higher concentration of NaCl, resistance to sodium periodate and boric acid and the ability to grow on MacConkey agar. Forty-one biotypes were found among 230 C. albicans isolates, nine among 21 C. glabrata, 13 among 25 C. parapsilosis, 12 among 25 C. krusei and five biotypes among 18 C. lusitaniae isolates. Contrary to other species, all of 18 C. tropicalis isolates belonged to the same biotype. In accordance with previously published reports, high discriminatory power of the method was found with Simpson's diversity index for C. albicans reaching 0.92. On the other hand, reproducibility was relatively low; from 12 randomly chosen C. albicans isolates tested repeatedly, only two showed identical results, five differed in one test and the others in several tests. Analysis of the occurrence of individual biotypes related to different anatomical locations, age groups and sexes of patients revealed neither statistically significant variations in distribution nor predilection of any single biotype. These findings suggest that the source of infection was endogenous in most cases. In comparison with results of similar studies, marked discrepancies in profiles of predominant biotypes were found, probably due to slight differences in composition of the test media or distinctive evaluation of results; however, it may reflect also geographical specificity of isolates. It can be concluded that the main advantages of the Odds biotyping system are high discriminatory power and cost-effectiveness. On the other hand, discrepancies in reproducibility of results as well as relatively long period for preparation of test media and for achieving of results decline its usefulness for epidemiological studies.

Subject Headings:
Infant
Male
Adolescent
Middle Aged
Humans
Index Medicus
Young Adult
Adult
Female
Child
Candida
Mycological Typing Techniques
Aged
Child Preschool

Source: Medline

165. Impact of platinum on the soil invertebrate Folsomia candida.

Citation: Neuro endocrinology letters, Jan 2012, vol. 33 Suppl 3, p. 173-178, 0172-780X (2012)

Author(s): Nemcova, Barbora; Bednarova, Ivana; Mikulaskova, Hana; Beklova, Miroslava

Abstract: Regarding the environmental pollution, platinum group elements (PGE) are in the centre of interest of current research. These rare elements are used as effective substances in automotive catalysts to reduce pollution by emissions originating from fuel combustion. Due to their harmful potential, it is necessary to monitor their content and behaviour in different samples. Comprehensive studies on PGE behaviour and effects are still lacking. Their distribution in the food chain and data on bioaccumulation has not been described so far. We focused on reproductive effects of platinum (PtCl4), in particular. Our study is based on a collembolan laboratory breed, test optimalization and validation according to the OECD 232 standards [CSN ISO 11267 - Soil quality - Inhibition of reproduction of Collembola (Folsomia candida) by soil pollutants]. The concentrations of PtCl4 tested were as follows: 5, 10, 25, 50 and 100 μM. The EC50 was determined after 28 days of testing. The results were evaluated using the inhibition of reproduction compared with controls. The EC50 was determined after the 28-day test. The value of 28dEC50 of the boric acid test was estimated at 120 mg/kg and the measured 28dEC50 of PtCl4 was 200.4 μM. The presented data can be considered as a step forward in the assessment of the potential risk of platinum in the terrestrial environment. However, more toxicity data for various species are needed to evaluate the environmental risk of platinum in soils.

Subject Headings:
Platinum
Age Factors
Animals
Female
Toxicity Tests
Soil Pollutants
Index Medicus
Arthropods
Reproduction
Behavior Animal
Platinum Compounds
Male

Source: Medline

166. Boric acid as reference substance: pros, cons and standardization.

Citation: Ecotoxicology (London, England), Apr 2012, vol. 21, no. 3, p. 919-924, 1573-3017 (April 2012)

Author(s): Amorim, M J B; Natal-da-Luz, T; Sousa, J P; Loureiro, S; Becker, L; Römbke, J; Soares, A M V M

Abstract: Boric acid (BA) has been successfully used as reference substance in some standard test guidelines. Due to the fact that previously selected reference substances present a significant risk to human health and/or are banned for environmental reasons, BA is being discussed for broader adoption in OECD or ISO guidelines. To provide input on BA data and contribute to the discussion on its suitability as a reference substance, in the present study BA was tested with two standard soil organisms, Enchytraeus albidus and Folsomia candida, in terms of survival, reproduction and avoidance. Additionally, published data on other organisms was analysed to derive the most sensitive soil dwelling invertebrate (hazard concentration-HC5). Results showed that BA affected the tested organisms, being two times more toxic for collembolans (LC50 = 96; EC50 = 54 mg/kg) than for enchytraeids (LC50 = 325; EC50 = 104 mg/kg). No avoidance behaviour occurred despite the fact that BA affects earthworms. Actually, it is the recommended reference substance for the earthworm avoidance test. Clearly, the suitable performance of BA in one species should not be generalized to other species. Absolute toxicity is not an important criterion for the selection of a reference substance, but it has been proposed that effects should

occur within a reasonable range, i.e. <1,000 mg/kg. We could confirm, compiling previous data that for most soil invertebrates, the EC50 is expected to be below 1,000 mg/kg. From these data it could be derived that the most sensitive soil dwelling invertebrate (HC5, 50%) is likely to be affected (EC10) at 28 (8-53) mg H(3)BO(3)/Kg, equivalent to 4.6 (1.4-8.7) mg boron/kg.

Subject Headings:
Reference Standards
Oligochaeta
Animals
Escape Reaction
Insects
Toxicity Tests
Avoidance Learning
Index Medicus
Environmental Monitoring
Soil Pollutants
Behavior Animal
Boric Acids
Guidelines as Topic

Source: Medline

Full Text: Available from *Springer NHS Pilot 2014 (NESLi2)* in *Ecotoxicology*; Note: ; Collection notes: Academic-License. Please when asked to pick an institution please pick NHS. Please also note access is from 1997 to date only.
Available from *ProQuest* in *Ecotoxicology*

167. Rapid separations of nile blue stained microorganisms as cationic charged species by chip-CE with LIF.

Citation: Electrophoresis, May 2012, vol. 33, no. 9-10, p. 1421-1426, 1522-2683 (May 2012)

Author(s): Nuchtavorn, Nantana; Bek, Fritz; Macka, Mirek; Suntornsuk, Worapot; Suntornsuk, Leena

Abstract: Rapid detection of microorganisms by alternative methods is desirable. Electromigration separation methods have the capability to separate microorganisms according to their charge and size and laser-induced fluorescence (LIF) detection have single-cell detection capability. In this work, a new combined separation and detection scheme was introduced using chip-based capillary electrophoresis (chip-CE) platform with LIF detection. Three microorganisms Escherichia coli, Staphylococcus aureus, and Candida albicans were selected as representatives of Gram-positive bacteria, Gram-negative bacteria, and fungi. While their cells carry an overall negative charge in neutral to alkaline pH, staining them with nile blue (NB) provided highly sensitive LIF detection with excitation and emission wavelengths at 635 nm and 685 nm, respectively, and at the same time, the overall charge was converted to positive. Electrolyte pH and concentration of polyethylene oxide (PEO) significantly affected the resolution of the microorganisms. Their optimal separation in the 14 mm separation channel was achieved in less than 30 s (R(s) > 5.3) in an electrolyte consisting of 3.94 mM Tris, 0.56 mM boric acid, 0.013 mM ethylenediaminetetraacetic acid disodium salt dihydrate (pH 10.5), and 0.025% PEO, with injection/separation voltages of +1000/+1000 V. The separation mechanism is likely employing contributions to the overall cationic charge from both the prevalently anionic membrane proteins and the cationic NB. Importantly, the resulting cationic NB-stained cells exhibited excellent separation selectivity and efficiency of □ 38000 theoretical plates for rapid separations within 30-40 s. The results indicate the potential of chip-CE for microbial analysis, which offers separations of a wide range of species with high efficiency, sensitivity, and throughput. © 2012 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim.

Subject Headings:
Polyethylene Glycols
Flow Cytometry
Candida albicans
Hydrogen-Ion Concentration
Bacteriological Techniques
Staphylococcus aureus
Fluorescent Dyes

Oxazines
Cations
Electrophoresis Capillary
Index Medicus
Escherichia coli

Source: Medline

168. Symptomatic Trichomonas vaginalis infection in the setting of severe nitroimidazole allergy: successful treatment with boric acid.

Citation: Sexual health, Sep 2012, vol. 9, no. 4, p. 389-391, 1448-5028 (September 2012)

Author(s): Muzny, Christina; Barnes, Arti; Mena, Leandro

Abstract: This report describes a patient with symptomatic Trichomonas vaginalis infection who was unable to tolerate nitroimidazole drugs because of severe hypersensitivity, for which desensitisation was not possible. Use of intravaginal clotrimazole, intravaginal paromomycin, intravaginal furazolidone, povidone-iodine douches, and oral nitazoxanide were unsuccessful in eradicating the patient's T. vaginalis infection. A 2-month course of intravaginal topical boric acid subsequently achieved a complete symptomatic cure and the patient remained T. vaginalis wet prep- and culture-negative 60 days after treatment.

Subject Headings: Drug Hypersensitivity
Administration Intravaginal
Trichomonas vaginalis
Humans
Index Medicus
Adult
Female
Boric Acids
Trichomonas Vaginitis
Nitroimidazoles

Source: Medline

169. [Genotyping of Vaginal Candida glabrata Isolates Using Microsatellite Marker Analysis and DNA Sequencing to Identify Mutations Associated with Antifungal Resistance].

Citation: Mikrobiyoloji bülteni, Jan 2013, vol. 47, no. 1, p. 109-121, 0374-9096 (January 2013)

Author(s): Döğen, Aylin; Durukan, Hüseyin; Güzel, Ahmet Barış; Oksüz, Zehra; Kaplan, Engin; Serin, Mehmet Sami; Serin, Ayşe; Emekdaş, Gürol; Aslan, Gönül; Tezcan, Seda; Kalkancı, Ayşe; Ilkit, Macit

Abstract: Vulvovaginal candidosis is the second most common cause of vaginitis (17-39%) after bacterial vaginosis (22-50%). Since the diagnosis of vulvovaginal candidosis mainly depends on clinical findings without mycologic confirmatory tests and treated empirically, the actual incidence rate of vulvovaginal candidosis is unknown. Approximately 70-90% of vulvovaginal candidosis cases are caused by Candida albicans, however the increasing incidence of C.glabrata infections and its reduced susceptibility to azole drug therapy have generated increasing attention. The epidemiology and population structure of vulvovaginal candidosis due to C.glabrata are poorly characterized. This study was aimed to genotype the C.glabrata strains isolated from vaginal samples in Cukurova region, Turkey by microsatellite markers, to investigate the antifungal susceptibility profiles of the strains and to determine the molecular mechanisms leading to phenotypical azole resistance. A total of 34 unrelated vaginal C.glabrata strains isolated from patients with acute (n= 11) and recurrent (n= 14) vulvovaginal candidosis, control group (n= 9) without vaginitis symptoms, and a reference strain of C.glabrata CBS 138 (ATCC 2001) were included in the study. These isolates were genotyped using multiple-locus variable number tandem repeat analysis of three microsatellite markers (RPM2, MTI, and Cg6). Analysis of microsatellite markers was performed by fragment size determination of RPM2, MTI, and Cg6 PCR products through capillary electrophoresis. For each of the evaluated strains, DNA sequence analysis was performed for one gene (CgERG11) and four loci (CgPDR1, NTM1, TRP1, and URA3) to detect

mutations possibly associated with antifungal resistance in each strain. In vitro susceptibility profiles of the strains to 13 antifungals and boric acid were determined according to CLSI document M27-A3 to investigate possible relationships between detected mutations and phenotypic resistance. C.glabrata CBS 138 strain was found to be susceptible to all the antifungals tested, while one of (%2.9) 34 vaginal C.glabrata isolates was found to be dose-dependent susceptible to fluconazole, 13 (38.2%) to itraconazole and 3 (8.8%) to voriconazole. No resistant strain were detected in the study population. Only three isolates were found to be resistant to clotrimazole (8.8%), however no relationship was identified between the genotypes and phenotypic resistance (p> 0.05). Thirteen genotypes were detected by microsatellite marker analysis, with high discrimination power (DP= 0.877). As a result, microsatellite marker analysis was validated as a rapid, reliable method for genotyping C.glabrata strains with good, but not optimal discriminatory power. Further studies examining larger numbers of isolates are needed to verify possible relationships between mutations and phenotypic resistance.

Subject Headings:
Genotype
Sequence Analysis DNA
Humans
Index Medicus
Antifungal Agents
Microsatellite Repeats
Mutation
Female
Candida
Drug Resistance Fungal
Candida glabrata
Microbial Sensitivity Tests

Source: Medline

170. Boric acid destabilizes the hyphal cytoskeleton and inhibits invasive growth of Candida albicans.

Citation: Yeast (Chichester, England), Apr 2015, vol. 32, no. 4, p. 389-398, 1097-0061 (April 2015)

Author(s): Pointer, Benjamin R; Boyer, Michael P; Schmidt, Martin

Abstract: Exposure of Candida albicans to sub-lethal concentrations of boric acid (BA) restricts the dimorphic fungus to its yeast morphology and prevents the formation of invasive hyphae on solid substrates. Exposure to BA causes a rapid and reversible disappearance of polarisome and Spitzenkörper in growing hyphae. In BA-treated hyphae of C. albicans, actin quickly reorganizes from cytoplasmic cables to cortical patches and cell wall growth switches from an apical to an isotropic pattern. As a result of the cytoskeletal changes, the hyphal tips broaden and directional growth of hyphae ceases in the presence of BA. An analysis of homozygous deletion strains showed that mutants with constitutive or enhanced hyphal growth (tup1, nrg1, ssn6, rbf1) are BA-sensitive, demonstrating that cellular morphology is a major determinant of BA tolerance. The screening of deletion mutants also showed that deficiencies of the main activator of hyphal gene expression, Efg1, and the Rim101-signalling cascade, leading to Efg1 activation, cause BA resistance. Taken together, the data presented show that the selective inhibitory effect on BA on C. albicans hyphae is rooted in a disruption of apical cytoskeletal elements of growing hyphae.

Subject Headings:
Fungal Proteins
Candida albicans
Gene Expression Regulation Fungal
Antifungal Agents
Index Medicus
Hyphae
Boric Acids
Cytoskeleton

Source: Medline

171. An Alternative Approach to Assess the Habitat Selection of Folsomia candida in Contaminated Soils.

Citation: Bulletin of environmental contamination and toxicology, Nov 2015, vol. 95, no. 5, p. 670-674, 1432-0800 (November 2015)

Author(s): Bori, Jaume; Riva, Maria Carme

Abstract: Avoidance tests with collembolans provide a quick assessment of soil quality. However, some parameters of the procedure can be modified in order to increase its performance. In this study we assessed the tendency of Folsomia candida to avoid soils contaminated with boric acid [350-700-1400-2800-5600 mg/kg soil dry weight (dw)], phenmedipham (35-70-140-280 mg/kg dw) or petroleum hydrocarbons (1312-1838-2625-3675-5250 mg/kg dw) by preferring an untreated soil. Two separate methodologies were applied, the one presented in the ISO standard 17512:2 and a modified version of the Petri dish method that allowed data acquisition after 2, 24 and 48 h of exposure. After combining data from three separate trials, effective median concentration values (EC50) from the presented method were lower and showed similar or less variability than those from the ISO procedure, suggesting the modified protocol as a suitable alternative screening tool.

Subject Headings:
Animals
Ecosystem
Petroleum
Environmental Monitoring
Soil Pollutants
Index Medicus
Petroleum Pollution
Arthropods
Soil
Boric Acids
Carbamates
Spain

Source: Medline

172. Non-albicans Candida Vulvovaginitis: Treatment Experience at a Tertiary Care Vaginitis Center.

Citation: Journal of lower genital tract disease, Jan 2016, vol. 20, no. 1, p. 85-89, 1526-0976 (January 2016)

Author(s): Powell, Anna M; Gracely, Edward; Nyirjesy, Paul

Abstract: The aims of this study are to analyze a cohort of women with vulvovaginal symptoms and positive cultures for non-albicans Candida (NAC) to determine whether yeast was responsible for their symptoms and to evaluate the mycological effectiveness of various regimens. This observational study was performed from retrospective chart review of patients with positive NAC cultures between April 1, 2008, and January 31, 2011, at a tertiary care vaginitis center. Patient intake demographics were entered into a database. Follow-up visits were analyzed for data about patient treatments and outcomes. Patients were considered a clinical cure if their symptoms were significantly improved and mycologic cure (MC) if later yeast cultures were negative. If clinical symptoms improved at the same time as MC, the isolate was considered the proximate cause for the symptoms. One hundred eight patients meeting entry criteria were analyzed. Boric acid was effective at obtaining MC in 32 (78%) of 41 patients with C. glabrata, 3 of 3 patients with C. tropicalis, and 3 of 3 patients with C. lusitaniae. Fluconazole was effective as initial treatment for 3 (60%) of 5 patients with C. glabrata and 13 (81%) of 16 patients with C. parapsilosis. In 52.7% of C. glabrata, 66.7% of C. parapsilosis, and 57.1% of C. tropicalis cases, effective antifungal therapy led to symptom improvement. In a tertiary care vaginitis center, NAC, when isolated on culture, caused clinically significant infections in approximately half of symptomatic patients. A majority of infections can be effectively treated with boric acid or fluconazole regardless of the non-albicans Candida species.

Subject Headings: Index Medicus

Source: Medline

173. Boric acid-dependent decrease in regulatory histone H3 acetylation is not mutagenic in yeast.

Citation: FEMS microbiology letters, Jul 2016, vol. 363, no. 13, 1574-6968 (July 2016)

Author(s): Pointer, Benjamin R; Schmidt, Martin

Abstract: Candida albicans is a dimorphic yeast commonly found on human mucosal membranes that switches from yeast to hyphal morphology in response to environmental factors. The change to hyphal growth requires histone H3 modifications by the yeast-specific histone acetyltransferase Rtt109. In addition to its role in morphogenesis, Rtt109-dependent acetylation of histone H3 lysine residues 9 and 56 has regulatory functions during DNA replication and repair. Boric acid (BA) is a broad-spectrum agent that specifically inhibits C. albicans hyphal growth, locking the fungus in its harmless commensal yeast state. The present study characterizes the effect of BA on C. albicans histone acetylation in respect to specificity, time-course and significance. We demonstrate that sublethal concentrations of BA reduce H3K9/H3K56 acetylation, both on a basal level and in response to genotoxic stress. Acetylation at other selected histone sites were not affected by BA. qRT-PCR expression analysis of the DNA repair gene Rad51 indicated no elevated level of genotoxic stress during BA exposure. A forward-mutation analysis demonstrated the BA does not increase spontaneous or induced mutations. The findings suggest that DNA repair remains effective even when histone H3 acetylation decreases and dispels the notion that BA treatment impairs genome integrity in yeast.

Subject Headings: Index Medicus

Source: Medline