Occlusive therapy in atopic dermatitis: overview
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CRD summary
The review concluded that the available data on the role of occlusive therapy in atopic dermatitis were encouraging but limited by the lack of adequate study controls and standardised designs. Although there were some methodological problems with the review which limit its reliability, the authors’ conclusions were suitably cautious and appear reasonable.

Authors' objectives
To examine the current evidence for the use of occlusive therapy in atopic dermatitis.

Searching
PubMed and EMBASE were searched from January 1966 to February 2009 for articles published in English or articles with English abstracts. Search terms were reported. Reference lists of relevant articles were also searched.

Study selection
Randomised controlled trials (RCTs), non-controlled studies, prospective studies, and retrospective studies of occlusive therapy in patients with atopic dermatitis were eligible for inclusion.

The included studies considered wet-wrap therapy and dry therapy in patients with various forms of eczema, various forms of atopic dermatitis, and lichen simplex disease. Various occlusive therapy agents were used, including beclomethasone dipropionate, betamethasone, chlorhexidine, clobetasol, diflucortolone valerate, fluticasone propionate, hydrocortisone, prednicarbat alone, mometasone fluoroate, saline, silver-coated material and emollients. The duration of therapy ranged from 24 hours to four weeks; the frequency of application was generally daily, but twice daily and weekly regimens were also included. Some studies included children only; other studies included adults only, or mixed age groups.

The authors did not state how many reviewers performed study selection.

Assessment of study quality
The authors did not state that they assessed study quality.

Data extraction
Data were extracted on response, other efficacy outcomes, atrophy, and systemic adverse events.

The authors did not state how many reviewers performed data extraction.

Methods of synthesis
A narrative synthesis was presented, grouping studies by type of therapy.

Results of the review
Eighteen studies were included in the review (n=408 participants). Fourteen studies were of wet therapy (n=275 participants), five of which were RCTs. Four studies were of dry therapy (n=133 participants), one of which was an RCT.

Wet occlusion: All studies demonstrated efficacy for wet occlusion compared with conventional open treatment in severe or acute, moderate and chronic atopic dermatitis patients.

Dry occlusion: One study showed a greater improvement in the control group than the dry occlusion group. Two studies showed a benefit with dry occlusion compared with control groups.
Adverse events: There was an increased risk of infection with occlusive therapy compared with conventional therapy, but this appeared to be manageable. Transient effects on morning cortisol and loss of diurnal cortisol rhythm could also occur.

Authors’ conclusions
The available data on the role of occlusive therapy in atopic dermatitis were encouraging but limited by the lack of adequate study controls and standardised designs.

CRD commentary
Inclusion criteria for the review were broadly defined. Two relevant sources were searched. There was the potential for language bias, as only English language articles were included. Publication bias was not assessed and could not be ruled out. There did not appear to be any attempts to reduce reviewer error and bias during data extraction and study selection.

Quality assessment did not appear to have been undertaken, so the quality of included studies could not be determined. Studies were narratively synthesised, which appeared appropriate given the type of data and variability in occlusive agents.

Overall, there were some methodological problems with the review which limit its reliability, but the authors’ conclusions were suitably cautious and appear reasonable.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors stated that further controlled studies of occlusive therapy in acute dermatitis are needed.

Funding
None.

Bibliographic details

PubMedID
19444691

DOI
10.1080/09546630902911854

Original Paper URL

Indexing Status
Subject indexing assigned by NLM

MeSH
Administration, Topical; Anti-Infective Agents, Local /administration & dosage; Dermatitis, Atopic /therapy; Emollients /administration & dosage; Glucocorticoids /administration & dosage; Humans; Occlusive Dressings; Randomized Controlled Trials as Topic

AccessionNumber
12010007528
Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.