The effectiveness of sitz bath in managing adult patients with anorectal disorders: a systematic review

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CRD summary
The review concluded that there was no strong evidence to support the use of sitz bath to relieve pain and promote fissure or wound healing among adult patients with anorectal disorders, but no complications were reported. This conclusion reflects the data presented, but only four small studies were included and it was possible that relevant studies were omitted.

Authors' objectives
To assess the effectiveness of sitz bath in adults with anorectal disorders.

Searching
MEDLINE and CINAHL were searched from 1990 to November 2009 for studies in English. Search strategies were reported in an appendix. Bibliographies of identified articles were screened for additional studies.

Study selection
Randomised controlled trials (RCTs) and quasi-RCTs that compared sitz bath with or without pharmacological therapies (such as analgesics, stool softeners, fibre supplement and antibiotics) against no sitz bath in adults with anorectal disorders and/or associated surgical interventions (such as haemorrhoids, acute or chronic anal fissures, rectal fistula, perirectal abscesses, perirectal diseases, perianal haematoma and perianal ulcerations, haemorrhoidectomy and sphincterotomy) were eligible for inclusion. The various administration methods for sitz bath (such as water temperature, frequency to soak inside the tub) were included in the review. Studies were required to report at least one of the outcome measures: overall intensity of pain; postoperative pain score; post-defecation pain score; acceleration of fissure/wound healing; patient satisfaction; and complications (such as infection and perineal burn).

Participants in the included studies were aged between 18 and 75 years. Diagnoses included anal fissure of less than two months duration, chronic anal fissure that failed conservative treatment and was treated with sphincterotomy and grade 3 or 4 haemorrhoids treated with haemorrhoidectomy. All studies were conducted in India and Taiwan. In three studies, participants in the intervention group were asked to perform warm sitz bath twice daily and after defecation for 10 minutes throughout the study period. Participants in the intervention group who did not require surgery received fibrogel and high fibre foods. Participants who required surgery received analgesics and oral antibiotics. Control groups received pharmacological intervention without sitz bath. In the other study, participants were asked to perform warm sitz bath (intervention group) or warm water spray (control group) once after defecation and four times daily for the first week of the study and twice daily for the next three weeks.

The authors did not state how many reviewers selected studies for inclusion in the review.

Assessment of study quality
Validity assessment was undertaken using the standardised critical appraisal instruments from Joanna Briggs Institute Systems Meta Analysis of Statistical Assessment and Review Instrument to rate 10 quality criteria (randomisation, allocation concealment, blinding of participants and outcome assessors, intention-to-treat analysis, baseline comparability of treatment and control groups, reliability and consistent application of outcome measures, avoidance of potential confounding and use of appropriate statistical measures). Reviewers also appraised the type of participant and intervention specific to the review.

Methodological quality of the included studies was independently assessed by two reviewers. Any disagreements were resolved by discussion with a third reviewer.
Data extraction
For continuous outcomes (pain scores), mean and standard deviation pain scores for treatment and control groups were extracted; where reported, 95% confidence intervals (CIs) and any statistical measure of difference between the groups were also extracted. For complication rates and fissure/wound healing, the number of patients in each group who experienced the outcome was recorded. Information on patient satisfaction was extracted as reported by the primary studies.

Data were extracted using standardised data extraction tools. The authors did not state how many reviewers performed the data extraction.

Methods of synthesis
Studies were combined in a narrative synthesis grouped by outcome measure.

Results of the review
Four studies (268 participants) were included in the review. One study was an RCT with a clear computerised sequential randomisation and allocation concealment. The remaining three studies were RCTs but without allocation concealment. The nature of the included studies meant that only outcome assessors were blinded.

Use of a sitz bath had no significant effect on overall intensity of pain (one study), postoperative pain (two studies) and speed of fissure or wound healing (three studies).

Conflicting findings were reported for post-defecation pain. One study reported no statistically or clinically significant difference in pain score at one or four weeks for patients with sitz bath versus no sitz bath. Another study reported a significant difference in pain relief after defecation among patients who underwent sphincterotomy for chronic anal fissure (p<0.0001); at week one, patients in the sitz bath group had mean pain scores of 3.75 versus 8.91 in the no sitz bath group. However, pain scores were measured differently between the two groups, the study was conducted over four weeks and only week one data were reported, and no measure of variance was reported.

Three studies reported patient satisfaction. One study reported significantly greater satisfaction in the sitz bath group than in the control group after four weeks (p<0.01), another study reported significantly greater satisfaction for patients in the water spray group compared with sitz bath (p<0.05) and the third study reported no significant difference between sitz bath and control groups.

Authors' conclusions
There was no strong evidence to support the use of sitz bath to relieve pain and promote fissure or wound healing among adult patients with anorectal disorders. No complications were reported.

CRD commentary
The review stated a clear research objective and defined inclusion criteria. The literature search was limited to two bibliographic databases and this, combined with the restriction to studies in English, raised the possibility that some studies were missed and language bias may have been present. Methodological quality of the included studies was assessed and results were reported. The quality assessment process included measures to minimise error and/or bias; it was unclear whether similar measures were applied to study selection and data extraction. A narrative synthesis was appropriate given the apparent between-study heterogeneity.

The authors' conclusions reflect the data presented, but only four small studies were included and it was possible that relevant studies were omitted.

Implications of the review for practice and research
Practice: The authors stated that sitz bath can be prescribed for the purpose of facilitating patient satisfaction; individual preferences may be a factor in considering prescribing a sitz bath. They further stated that sitz bath should not be prescribed for the purpose of pain reduction (except for post-defecation pain reduction).
Research: The authors stated a need for further studies to assess the best way to use water to promote hygiene and comfort for the patients; use of water spray in different cultural groups should be investigated further. They stated that future studies should employ a more vigorous unbiased research methodology with standard evaluations.

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