Nasal saline irrigations for the symptoms of chronic rhinosinusitis (Review)

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Nasal saline irrigations for the symptoms of chronic rhinosinusitis

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ABSTRACT

Background
The use of nasal irrigation for the treatment of nose and sinus complaints has its foundations in yogic and homeopathic traditions. There has been increasing use of saline irrigation, douches, sprays and rinsing as an adjunct to the medical management of chronic rhinosinusitis. Treatment strategies often include the use of topical saline from once to more than four times a day. Considerable patient effort is often involved. Any additional benefit has been difficult to discern from other treatments.

Objectives
To evaluate the effectiveness and safety of topical saline in the management of chronic rhinosinusitis.

Search strategy
Our search included the Cochrane Ear, Nose and Throat Disorders Group Trials Register, the Cochrane Central Register of Controlled Trials (CENTRAL, The Cochrane Library, Issue 4 2006), MEDLINE (1950 to 2006) and EMBASE (1974 to 2006). The date of the last search was November 2006.

Selection criteria
Randomised controlled trials in which saline was evaluated in comparison with either no treatment, a placebo, as an adjunct to other treatments or against treatments. The comparison of hypertonic versus isotonic solutions was also compared.

Data collection and analysis
Trials were graded for methodological quality using the Cochrane approach (modification of Chalmers 1990). Only symptom scores from saline versus no treatment and symptom and radiological scores from the hypertonic versus isotonic group could be pooled for statistical analysis. A narrative overview of the remaining results is presented.
Main results

Eight trials were identified that satisfied the inclusion criteria. Three studies compared topical saline against no treatment, one against placebo, one as an adjunct to and one against an intranasal steroid spray. Two studies compared different hypertonic solutions against isotonic saline.

There is evidence that saline is beneficial in the treatment of the symptoms of chronic rhinosinusitis when used as the sole modality of treatment. Evidence also exists in favour of saline as a treatment adjunct. No superiority was seen when saline was compared against a reflexology ‘placebo’. Saline is not as effective as an intranasal steroid. Some evidence suggests that hypertonic solutions improve objective measures but the impact on symptoms is less clear.

Authors’ conclusions

Saline irrigations are well tolerated. Although minor side effects are common, the beneficial effect of saline appears to outweigh these drawbacks for the majority of patients. The use of topical saline could be included as a treatment adjunct for the symptoms of chronic rhinosinusitis.

PLAIN LANGUAGE SUMMARY

Nasal irrigation with saline (salt water) for the symptoms of chronic rhinosinusitis

The use of nasal irrigation for the treatment of nose and sinus complaints has its foundations in yogic and homeopathic traditions. It is often prescribed as an adjunct to other treatments such as intranasal steroids or antibiotics. However, there is significant effort involved in preparing and delivering the solutions. This review summarises the evidence for the effect of saline irrigations in the management of the symptoms of chronic rhinosinusitis. There is evidence that they relieve symptoms, help as an adjunct to treatment and are well tolerated by the majority of patients. While there is no evidence that saline is a replacement for standard therapies, the addition of topical nasal saline is likely to improve symptom control in patients with persistent sino-nasal disease. No recommendations can be made regarding specific solutions, dosage or delivery. There are no significant side-effects reported in trials.