

## **Cochrane Review summary: Oral rinses, mouthwashes and sprays for improving recovery following tonsillectomy**

Cochrane summaries are based on new and updated systematic reviews published in The Cochrane Library. The summary must be read in conjunction with the full review when making decisions. The authors' conclusions are summarised but have not been reinterpreted.

### **Clinical context**

Tonsillitis (inflammation or enlargement of the tonsils) occurs mainly in children due to a variety of reasons including chronic illness due to recurrent infection and enlargement of the tonsils, with difficulties in swallowing and breathing, very large tonsils that obstruct breathing, and recurrent ear infections. Tonsillectomy is the surgical removal of the tonsils, two pads of lymphoid (glandular) tissue located on each side at the back of the throat. There are side effects to the tonsillectomy procedure such as pain and bleeding, and various postoperative treatments have been used to minimise these symptoms from occurring.

The aim of this Cochrane Review was to assess the effects of oral rinses, mouthwashes and sprays in improving recovery following tonsillectomy. The search for this review was updated in April 2011.

### **Inclusion criteria**

#### **Studies**

Although 70 studies were found in the initial search, only six double blinded randomised controlled trials using placebos were eligible for the final review in which oral rinses and mouthwashes were compared to placebo pre- and postoperatively, and topical sprays were compared to placebo postoperatively. Measured outcomes included pain and bleeding from the first 48 hours to 2 months after surgery.

#### **Participants**

The final sample consisted of 528 participants, 397 of whom were children. None of the participants had any other illnesses or conditions which may have adversely affected their outcomes (like a bleeding disorder or diabetes).

#### **Intervention**

Four of the 6 trials tested a mouth rinse of benzydamine hydrochloride; one tested lidocaine rinse, and one tested a hydrogen peroxide spray. The placebos used were normal saline spray, and rinses of either water or an unspecified material. Administration timing and frequency varied widely in all studies.

#### **Outcomes**

Various scales were used to measure postoperative pain, and the timing of the assessment was not consistent between studies. Three studies collected data on the use of analgesics but the data was not useful. Postoperative bleeding data was not reported.

## Results

In one study use of the lidocaine spray was found to be more effective to reduce postoperative pain than the saline spray up to the third postoperative day ( $p < 0.05$ ). The other studies did not have reliable results on pain reduction. The one trial that reported bleeding six days after tonsillectomy found a relationship between bleeding and the use of hydrogen peroxide.

Risk of bias: the risk of bias was assessed as high, due to selective reporting, incomplete outcome data and selection bias.

## Authors' conclusions

### Implications for practice

There is some evidence that pain can be relieved after tonsillectomy using topical analgesics, and that this effect can be augmented with concomitant systemic analgesics, but the evidence for both is not strong. The use of benzydamine spray was not proven to be conclusively effective.

### Implications for research

The reduction of postoperative pain is a major goal for patients after tonsillectomy. This mandates a need for the use of internally and externally valid, reliable and consistent tools to measure pain and the effect of analgesics, not only in practice, but also in research studies. Indirect measures of pain (such as changes in vital signs) may not be as accurate as standardised visual analogue scales. If the primary effect of an intervention is not to reduce pain, but to reduce other side effects, then its value in providing data for the reduction of pain can be questioned.

Well-designed research studies with placebos, large sample sizes, multiple arms where doses and analgesic regimes are varied need to be undertaken in this area. They should then be reported using the CONSORT guidelines (Consolidated Standards of Reporting Trials).

Summarised from: Fedorowicz Z, Al-Muharrraqi MA, Nasser M, Al-Harthy N, Carter B. Oral rinses, mouthwashes and sprays for improving recovery following tonsillectomy. *Cochrane Database of Systematic Reviews* 2011, Issue 7. Art. No.: CD007806. DOI: 10.1002/14651858.CD007806.pub3.

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