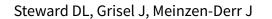


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Steroids for improving recovery following tonsillectomy in children (Review)



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[Intervention Review]

Steroids for improving recovery following tonsillectomy in children

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ABSTRACT

Background

This is an update of a Cochrane Review first published in The Cochrane Library in Issue 1, 2003.

Tonsillectomy continues to be one of the most common surgical procedures performed worldwide. Despite advances in anesthetic and surgical techniques, post-tonsillectomy morbidity remains a significant clinical problem.

Objectives

To assess the clinical efficacy of a single intraoperative dose of dexamethasone in reducing post-tonsillectomy morbidity.

Search methods

We searched the Cochrane Ear, Nose and Throat Disorders Group Trials Register; the Cochrane Central Register of Controlled Trials (CENTRAL); PubMed; EMBASE; CINAHL; Web of Science; BIOSIS Previews; Cambridge Scientific Abstracts; ISRCTN; and additional sources for published and unpublished trials. The date of the most recent search was 29 October 2010, following a previous search in September 2002.

Selection criteria

Randomized, double-blind, placebo-controlled trials of a single dose of intravenous, intraoperative corticosteroid for pediatric patients (age < 18 years) who underwent tonsillectomy or adenotonsillectomy.

Data collection and analysis

The first author extracted data regarding the primary outcome measures and measurement tools from the published studies. The first author also recorded data regarding study design, patient ages, procedures performed, dose of corticosteroid and method of delivery, as well as methodological quality. When data were missing from the original publications, we contacted the authors for more information. We performed data analysis with a random-effects model, using the RevMan 5.1 software developed by the Cochrane Collaboration.

Main results

We included 19 studies (1756 participants). We selected only randomized, placebo-controlled, double-blinded studies to minimize inclusion of poor quality studies. However, the risk of bias in the included studies was not formally assessed. Children receiving a single intraoperative dose of dexamethasone (dose range = 0.15 to 1.0 mg/kg) were half as likely to vomit in the first 24 hours compared to children receiving placebo (risk ratio (RR) 0.49; 95% confidence interval (CI) 0.41 to 0.58; P < 0.00001). Routine use in five children would be expected



to result in one less patient experiencing post-tonsillectomy emesis (risk difference (RD) -0.24; 95% CI -0.32 to -0.15; P < 0.00001). Children receiving dexamethasone were also more likely to advance to a soft/solid diet on post-tonsillectomy day one (RR 1.45; 95% CI 1.15 to 1.83; P = 0.001) than those receiving placebo. Finally, postoperative pain was improved in children receiving dexamethasone as measured by a visual analog scale (VAS, 0 to 10) (MD -1.07; 95% CI -1.73 to -0.41; P = 0.001), which correlates clinically to a reduction in pain (on a VAS of 0 to 10) from 4.72 to 3.65. No adverse events were noted in the included studies.

Authors' conclusions

The evidence suggests that a single intravenous dose of dexamethasone is an effective, safe and inexpensive treatment for reducing morbidity from pediatric tonsillectomy.

PLAIN LANGUAGE SUMMARY

Steroids for improving recovery following tonsillectomy in children

After children have a tonsillectomy or adenotonsillectomy (surgery to remove the adenoids and/or tonsils), pain, nausea, vomiting and delays to return to eating are common. The corticosteroid drug dexamethasone is sometimes given in a single intravenous dose (through the veins) during surgery to try to prevent vomiting after the operation. We included 19 randomized controlled trials in the review, with a total of 1756 patients. The review of trials found that a dose of corticosteroid during tonsillectomy or adenotonsillectomy can prevent vomiting for one out of every five children who gets the drug. Children also return to a normal diet more quickly and they have less pain after surgery.