Intra-operative steroids to lessen tonsillectomy symptoms

Where are we at regarding steroid prophylaxis given during tonsillectomy to lessen post-operative symptoms including pain, nausea and vomiting (PONV) and secondary haemorrhage? Children and adults should be analysed separately, not least because in adults subjective outcomes such as pain will be more reliable and recovery in adults can take 2 weeks or even longer. A systematic review and meta-analysis of per-operative dexamethasone in adults having a tonsillectomy is in this issue [pg 531]. The 2003 Cochrane review of dexamethasone in children has been recently updated with the addition of 10 trials to the 9 previous trials and its abstract is reproduced on page 573. As this Cochrane paediatric review has fewer unanswered questions it is summarised first.

In children a single intravenous dose of dexamethasone (0.15–1 mg/kg) make them half as likely to vomit in the first 24 h compared with children that received placebo [RR 0.49 (CI 0.4, 0.6)]. The number needed to treat to prevent one child vomiting is 5, a figure that makes therapy worthwhile. A similar degree of benefit in the number needed to treat was seen in return to a normal diet on the day of the operation. The VAS of pain was reduced by dexamethasone from 4.7 to 3.7 on a 10 point scale.

In children, the major concern regarding dexamethasone has been the potential to increase the risk of secondary haemorrhage.1 The Cochrane review did not have haemorrhage as one of their outcomes but it was discussed, using data from non-randomised case series. Chart reviews of 3318 children receiving dexamethasone did not show any increase in bleeding rates associated with steroid use. Therefore, the case for routinely using a single intravenous dose of dexamethasone in children seems well proven without any increase in haemorrhage rates.

In the adult review on page 531, seven randomised controlled trials in 580 adults were meta-analysed regarding the mean post-operative pain VAS scores. A significant lessening of post-operative pain was found but the heterogeneity of trials was significant. This could have been due to a number of factors; whether it was a single or prolonged prescription of dexamethasone, the surgical technique and other intra-operative measures such as local anaesthetic infiltration. The only one of these factors that was available for meta-analysis was the dosage of dexamethasone. It was found that it was only if the dosage of dexamethasone was high (total > 10 mg in the first 24 h) was there an effect on pain [SMD −1.5 (CI −0.4, 0.1)]. Lesser dosages had no effect. On meta-analysis of three trials, a reduction in post-operative nausea and vomiting as well as bleeding was found, albeit the criterion for the latter was often not clearly defined.

So the conclusion in adults is that dexamethasone has the potential to reduce post-operative tonsillectomy pain but further trials are needed to define the optimum dose to give symptom relief in the first 24 h. More prolonged trials of therapy during the recovery period are also now indicated to assess whether continuation of oral steroids post-operative can speed recovery and fitness to return to normal activities. The evidence we have for the effect of oral steroid on acute sore throats would make such an effect probable.2

A randomised controlled trial of ossiculoplasty

It is rare in surgery to have a randomised controlled trial that compares one surgical technique with another. It is even rarer to have a trial for a relatively infrequent operation. In ear surgery, improving the hearing by reconstructing the ossicular chain from the tympanic membrane to the stapes footplate with a TORP prosthesis, is one such operation. Keeping the TORP in place long term is where different techniques could make a difference to the hearing outcome.

The trial reported on page 543 of 130 patients is thus fairly unique. In all 130 patients, the same titanium TORP prosthesis was used by the same surgeon, with a cartilage graft between the tympanic membrane and the TORP head plate. What differed was how the shaft was stabilised. In 65 patients, the shaft was placed through a punched hole in another piece of cartilage and positioned in the oval window. In the other 65 patients, the cartilage was positioned more laterally over the bone of the fallopian canal. One year postoperative, 59% of those ears with stabilisation in the oval window had air–bone gap of 20 dB or less. Those with more lateral stabilisation had a significantly greater percentage of 72% with such an air–bone gap. This is material difference as well as a significant difference. Even longer term follow-up will be interesting to report, and whether these results can be generalised to other surgeons is another matter. However,
what can be said is that randomised controlled trials can be carried out in ear surgery. What is required is to have a large enough series of an operation whose results could be bettered by different techniques.

**Routine ice-lollies for post-tonsillectomy pain in children**

One of the editor’s earliest childhood memories is having his tonsils removed. Afterwards, on being asked if he enjoyed the ice cream my parents had brought in for me, he had to respond that I did not get it. His parents presumed that the nurses had eaten it.

From the randomised controlled trial on page 566, it would appear that today’s child should be routinely offered a slightly cheaper option of an ice-lolly. In this trial of 96 children, ice-lollies halved the pain score in the first hour following surgery if not longer. Coincidentally, all the children commendably had preoperative steroids [review page 573] so the pain relief of ice-lollies is additive to per-operative steroids. Offering children a postoperative ice-lolly should, therefore, be routine, and if the nurses wanted to show them how to lick one, they could have an ice-lolly themselves.

**High-case volume increases survival in naso-pharyngeal cancers treated with radiotherapy**

It is natural to think that the more cases of a specific condition a department manages, the more likely that their patients will have a superior outcome. However, this can be difficult to prove, mainly because there are so many outcomes to consider, disease related, patient symptoms, quality of life and ease of access to treatment. In the UK, it is later that politicians choose to prevent the closure of small district hospitals where by definition the experience available will be limited, with poorer disease and symptom outcomes.

Naso-pharyngeal tumours are common in Chinese populations. So having a cohort of 562 newly diagnosed patients treated with radiotherapy with or without chemotherapy [page 558] gives an opportunity to investigate the factors predicting survival using the 5-year survival data. Taiwan’s National Health Research Insurance Database has been used by many for such analyses as the data includes age, co-morbidity, diagnosis, place of treatment, method of treatment and survival. It does not include the stage of tumours, but the authors of this paper reasonably argue that for naso-pharyngeal tumours, whether the patient is given chemotherapy in addition to radiotherapy is a good surrogate marker for tumour stage.

In multivariate analysis, an age of over 65 years was the most significant predictor of poor survival [HR 2.8 (1.9, 4.1)] which is in keeping with other studies. The only other factor that was a predictor of survival was the number of cases of naso-pharyngeal cancer managed per year. Those that managed more than six cases per year had a better 5-year survival of 77% compared with 64% for the centres with six or less cases per year once adjusted for age [HR 0.65 (0.5, 0.9)]. In this study, there were 83 radiation centres, only 27 [33%] of which managed more than six cases per year.

For countries with a much lower prevalence of naso-pharyngeal tumours, such as the UK, this would suggest that management of these cases should be much more centralised that it is at present.

**The Editor**

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2. Browning G.G. (2009) A meta-analysis that could reduce the role of tonsillectomy for recurrent sore throats. *Clin. Otolaryngol.* 34, 564–564