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## Comments

Comments to ORL 2013;75:144–151 (DOI: 10.1159/000343706)

*M.T. Brigger, San Diego, Calif.:* I wholeheartedly agree with the thoughtful approach and judicious balance of risks and benefits provided by Dr. Czarnetzki and Dr. Tramer regarding making tonsillectomy a safer procedure. In particular, I agree that perhaps a ‘wait-and-see’ approach may be appropriate in many patients to avoid undue risk. Despite the increasing interest in pathways and guidelines, in many aspects of care the evidence is insufficient to develop a step-by-step approach and thoughtful patient-centered care is necessary.

As the authors eloquently outlined, various controversies continue to exist. In North America, the focus has rapidly shifted from the steroid controversy to postoperative pain control as the United States Food and Drug Administration has placed the highest level of caution (‘black box warning’) on codeine-containing products and has listed tonsillectomy as a contraindication to codeine use. This has led to increased efforts to better define and design postoperative pain control regimens with a renewed interest in the role of ibuprofen, which was recommended by the American Academy of Otolaryngology, Head and Neck Surgery Clinical Practice Guidelines [1].

Regarding perioperative dexamethasone, there are various interpretations and weaknesses of the available data. Clinically speaking, a controversy still exists as evidenced by our article in this issue where much of the same data cited by Dr. Czarnetzki and Dr. Tramer leads to different conclusions regarding the safety of dexamethasone.

Ultimately, the most important aspect of the ongoing discussions surrounding the controversies is to thoughtfully continue the dialogue and seek to develop the best evidence to provide a basis to adequately counsel and provide the best care for our patients.

*E. Hultcrantz, E. Ericsson, Linköping:* Pain control after tonsillectomy is crucial for the wellbeing of all children during the postoperative period; it is not a situation for ‘wait and see’. The author claims that not all patients will suffer intolerable pain, but cites no references for this. Patients do experience pain after tonsillectomy and this can last from 7 to 10 days with moderate to severe intensity and significant morbidity. Several researchers have found inadequate pain management in children at home after tonsillectomy. What the author

confirms is that undertreatment of postoperative pain still exists. The goal of postoperative pain management is to minimize or eliminate discomfort, thereby facilitating the recovery process and avoiding complications. Undertreatment of pain leads to increased morbidity as well as postoperative behavioral changes such as sleep disturbances, separation anxiety, apathy, and withdrawal. Poor pain management also leads to increased utilization of health services. Children and parents can avoid readmission to the hospital for control of pain and management of dehydration owing to poor oral intake which is one frequent response to the pain.

The effective treatment of pain is to start preoperatively with paracetamol 40 mg/kg body weight. We agree that paracetamol for the treatment of tonsillectomy pain is often insufficient at the recommend doses. The commonly used dosage is even less effective for postoperative analgesia, and higher doses are therefore recommended (for healthy children) during the first 3 postoperative days. We recommended 80–100 mg/kg body weight/day divided into 4 doses and then reduced by 25%. We always combine this with the nonsteroidal anti-inflammatory drug (NSAID) diclofenac 1–1.5 mg/kg body weight  $\times$  3 or ibuprofen 5–7 mg/kg body weight  $\times$  4, but our recommendations are for administration postoperatively, not preoperatively.

The authors need to update the evidence about effects of NSAIDs for tonsillectomy and the risk of postoperative bleeding. A systematic review and meta-analysis by Rigglin et al. [2] with 36 randomized control trials was published on February 20, 2013. Data for 1,747 children and 1,446 adults was included. The conclusion suggested that NSAIDs can be considered as a safe method of analgesia among children undergoing tonsillectomy.

To maintain the immediate postoperative comfort obtained by a proactive analgesic, it is necessary to follow-up with analgesia administered on a continuous basis, and discharge instructions must be given both verbally and in writing regarding pain assessment and management, and regarding potential side effects.

The effect of codeine when administered to ultrarapid metabolizers and of tramadol that uses CYP2D6 is well described, *but* it must be more explicit after a recent Food and Drug Administration report [3–5] recommending the avoidance of codeine and tramadol in the treatment of children and youths – children have died after being given codeine. The Food and Drug Administration strongly recommends against the use of codeine to manage pain in children after a tonsillectomy and/or adenoidectomy.

If paracetamol combined with an NSAID is not enough to keep pain at an acceptable level, oral clonidine is an effective analgesic for children undergoing tonsillectomy [4]. There is no reference to clonidine in the author's review.

*D. Lowe, Middlesbrough:* The anaesthetists' view in this area is welcomed with interest. I feel that the usefulness of dexamethasone is strongly advocated in UK tonsillectomy/anaesthetic practice.

*J.P. Windfuhr, Mönchengladbach:* Adequate treatment of posttonsillectomy pain remains a challenging problem. Confounding factors outside controlled circumstances in clinical studies encompass irregular and/or insufficient administration, prescription and/or intake. However, paracetamol and NSAIDs are commonly administered, particularly in children. Despite this fact, bleeding rates vary considerably in studies in whom pediatric patients presumably received comparable amounts and types of analgesics. Local infiltration can be associated with major adverse events including death, neural lesions, bacterial spread and so on. The analgesic effect is limited [6] but swabs may help to overcome a painful postoperative period.

*S. Sarny, Graz:* Paracetamol, NSAIDs, opioids and dexamethasone affect postoperative pain, postoperative haemorrhage and the risk for postoperative nausea and vomiting to a varying extent. Paracetamol is a mild analgesic with the advantage that it does not interfere

with platelet function and consequently not increase the haemorrhage risk. NSAIDs are indicated in patients with acute pain but increase the haemorrhage risk by inhibiting the enzyme cyclo-oxygenase. Opioids are recommended in patients with moderate to severe pain; however, side effects like constipation and respiratory depression have to be considered. For the choice of medication the patient's risk factors, especially the age, should be paid attention to. As postoperative nausea and vomiting are unacceptable in children, prescribed drugs should not additionally increase their risk of occurrence. Local anaesthesia swabs are an interesting alternative to reduce postoperative pain and should be examined in double-blinded studies. Previous studies found an association between posttonsillectomy pain and infection of the tonsillar fossa with higher pain levels in patients with a local infection. Analgesics administered intra- and postoperatively with an anti-inflammatory activity can reduce the risk of tonsillar fossa infections which leads to less pain after surgery. This positive effect can be another argument for the prophylactic use of analgesia.

## References

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- 2 Riffin L, Sommer D, Koren G, Ramakrishna J: A 2013 updated systematic review and meta-analysis of 36 randomized controlled trials: no apparent effects of nonsteroidal anti-inflammatory agents on the risk of bleeding after tonsillectomy. *Clin Otolaryngol* 2013;38:115–129.
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- 4 Food and Drug Administration FDA: Pediatric postmarket adverse event review. 2012. <http://www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/PediatricAdvisoryCommittee/UCM317377.pdf> (accessed April 7, 2013).
- 5 Food and Drug Administration FDA: Is post-surgery codeine a risk for kids? <http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm315497.htm> 20130220 (accessed April 7, 2013).
- 6 Stelter K, Hempel JM, Berghaus A, Andratschke M, Luebbbers CW, Hagedorn H: Application methods of local anaesthetic infiltrations for postoperative pain relief in tonsillectomy: a prospective, randomised, double-blind, clinical trial. *Eur Arch Otorhinolaryngol* 2009;266:1615–1620.