

Do antibiotics decrease post-tonsillectomy morbidity?

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ABSTRACT

Objective: A tonsillectomy audit was carried out and compared with other studies, to emphasize the role of antibiotics.

Methods: This study was carried out at North West Armed Forces Hospital, Tabuk, Kingdom of Saudi Arabia, during the year January 1999 through to December 1999. This is a retrospective study of patients who had tonsillectomy with or with adenoidectomy, the topics audited included indication for surgery, grade of surgeon, method of surgery, length of hospital stay, complications and the use of postoperative antibiotics.

Results: A total of 185 patients underwent tonsillectomy with or without adenoidectomy. The patients age ranged between 2 years to 53 years and the majority were

children. In our audit we found no difference with regard to grade of surgeons, method of hemostasis in the outcome of surgery. Moreover, postoperative antibiotics had no role in pain control, postoperative fever, secondary hemorrhage or reduction in hospital stay. The administration of analgesics on the basis of, as required, had poor pain control.

Conclusion: Post tonsillectomy antibiotics did not prove to have a role in minimizing postoperative morbidity. Moreover, analgesics given on the basis of as required had a limited value.

Keywords: Tonsillectomy, audit, antibiotic, children.

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Tonsillectomy is the most commonly performed operation in otolaryngology practice.¹ In the United Kingdom and Scotland it is 40% and 20% of all operations performed by otolaryngologists.^{2,3} Wide campaign to decrease the morbidity of this common surgery, included method of surgery, analgesics administration either intra-operative^{4,5} or post-operative⁶⁻¹² as well as post-operative antibiotics^{3,10,13-15} was debatable. There is no recorded tonsillectomy audit in the Kingdom of Saudia Arabia (KSA) at least we could not find such a study in the medline for comparison.

Method. This is a retrospective study of patients who had tonsillectomy with or without adenoidectomy from January 1999 up to December 1999. The audited topics included age, sex, grade of

surgeons, method of surgery, complications, postoperative antibiotic administration and duration of hospital stay.

Results. A total number of 185 patients underwent tonsillectomy with or without adenoidectomy. One hundred and twenty one, (65.4%) were males and 64 (34.5%) were females. One hundred and thirty (70.2%) were less than 10 years, 26 (14.1%) were between 10 years and 20 years, 22 (11.9%) were between 21 years and 30 years and 7 (3.8%) were more than 30 years (**Table 1**). The youngest patient was 2 years while the oldest was 53 years. Surgeon grades were Consultant/Senior Registrar. Indications for surgery were recurrent tonsillitis, obstructing tonsils, quinsy, persistent sore throat, otitis media with effusion and

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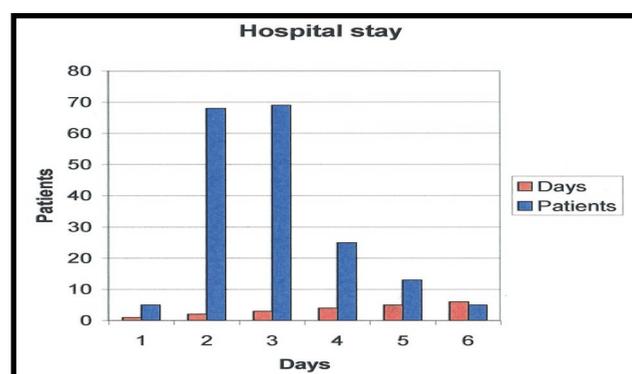
Table 1 - Age distribution.

Age	N (%)
< 10 years	130 (70.2)
10-20 years	26 (14.1)
21-30 years	22 (11.9)
> 30 years	7 (3.8)
N - number	

halitosis. Tonsillectomy was carried out by the classical dissection method and hemostasis controlled with electrocautery or ligation. There was no difference in the outcome. Fever was the most frequent postoperative complication it ranged from 37.2°C to 39°C. Temperature of 37.8°C and 38.4°C was recordable for up to the 4th day of surgery in 2 patients.

The criteria of pain estimated from the progress notes where there was a delay in oral intake or complaint of sore throat, which was common in the first 24-hours of surgery. Non-steroid anti-inflammatory drugs (NSAIDs) were prescribed as required in all of the patients, which showed poor pain control. Three adults and one child had secondary hemorrhage (2.1%) after discharge who required readmission, one adult and the child were taken to operative theatre to control the bleeding points while the other 2 were treated conservatively. Hospital stay ranged from one to 6 days the mean being 2.9 days, the peaks were 3 and 4 days respectively (**Figure 1**). The noted longer hospital stay was due to delay in oral feed, persistent pain, fever and social reasons. All of the patients had postoperative antibiotics, however, it had no role in the operative outcome with regards to fever, pain, hospital stay and secondary hemorrhage.

Discussion. Medical audit now has an established role in clinical practice, to improve the quality of patient care.^{16,17} Hence, this audit is meant for comparing with other studies in the subject and to emphasize the role of antibiotics following tonsillectomy. Tonsillectomy with or without adenoidectomy is the most frequent surgical procedure in any otolaryngology unit. It is 40% of the total ear, nose and throat (ENT) operative list in our hospital. Method of surgery, hemostasis control and grade of surgeon did not show any difference in regard to operative outcome. Postoperative fever, pain and secondary hemorrhage were the most

**Figure 1** - Days of hospital stay.

frequent complications in that order, although this study is similar to other audits, secondary hemorrhage was not common. It is fair to mention here, there was no report in the progress notes of postoperative emesis. Fever ranged from 37.2°C to 39°C, the majority of the recorded temperature was in the first 24 hours of surgery that is similar to a previous study.¹⁸ Only 2 patients had fluctuating low-grade temperature up to the 4th day of surgery. Fever was most probably due to operative trauma as infections and other causes were excluded.

Secondary hemorrhage was encountered in 4 patients only (2.1%) after they were discharged from the hospital, 2 of these, bleeding was controlled under general anesthesia while the other 2 by conservative means as inpatient, however, none of them required blood transfusion. All patients were put on as required NSAIDs that showed poor pain control. Although some patients had inherent tolerance to pain than others and required some or no analgesics post operative, it could be better controlled if given regularly instead of as required bases. It is a routine practice in our hospital to put patients on antibiotics after surgery. However, it proved to have a doubtful role as previously reported,¹⁵ but that study involved pediatric group only. It could be argued here that our low incidence rate of secondary hemorrhage was due to antibiotic, but in a previous prospective audit it did not prove to be of value.¹⁹ Antibiotics was also reported to minimize morbidity in regard to throat and ear pain, fever, lethargy and mouth odor^{14,19} in most pediatric patients, this was not seen in other studies.^{3,20} In addition, bacteremia is a recognized occurrence during tonsillectomy¹³ but showed to have no link to fever, pain or postoperative bleeding²⁰ that further query the advantage of antibiotic after tonsillectomy.

Further more, the general observation of children tolerating surgery more than adults, and the question of compliance with medication at home after discharge are logical reasons to doubt the value of antibiotics. However, antibiotics are recommended when there is valvular heart defect or prosthesis

implant to prevent deep-seated infection.^{21,22} After this study our attitude towards routine antibiotics post-tonsillectomy has been revised.

In conclusion, post tonsillectomy complications are inevitable, however, explaining the outcome to the patient or their parents may help prepare the patient psychologically and alleviate their apprehension. On the other hand NSAID is an ideal postoperative analgesic and anti pyretic agent, when given at regular intervals. Finally, post tonsillectomy antibiotics should be recommended for selected cases instead of routine prescription.

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