

Tonsillectomy in Saudi Arabia

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Objectives: Survey of otolaryngologists in Saudi Arabia regarding the indications of tonsillectomy, the signs and symptoms they depend upon, the value of history, their method of tonsillectomy and postoperative analgesics used.

Methods: A questionnaire was sent to 185 otorhinolaryngologists and their replies were analyzed.

Results: Recurrent tonsillitis, peritonsillar abscess and sleep apnoea syndrome were on top of the list of indications. The history of infection and symptomatic tonsils were considered most important. The dissection method of tonsillectomy was the favourite and paracetamol the most commonly prescribed post operative analgesic.

Conclusion: The view of otolaryngologists practicing in Saudi Arabia seems to be in line with international standards in reference to tonsillectomy. Recurrent tonsillitis was the commonest indication and the dissection method was the favoured method.

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The indications for tonsillectomy remain controversial, though, it is still one of the most common surgical procedures in children¹. Although the number of tonsillectomies performed have declined over the years, they still account for 20% of all operations performed by otolaryngologists². In the early part of the last century tonsillectomy became very popular and reached its zenith in the 1930s after which it began to decline³. Recently Mattila et al from Finland⁴ described the frequency of tonsillectomy to be 8% among their sample. The tonsillectomy rate in children varies considerably between countries⁵.

Recurrent infections, peritonsillar abscess and hypertrophy of the tonsils were and still are the most common indications. The decision to operate is based, in most cases, on the history and physical examination. Glover⁶ was the first to suggest that different surgeons vary in the importance they give to particular signs and symptoms when they assess patients for tonsillectomy. More recently Tucker⁷ showed the differences that exist among British otolaryngologists regarding tonsillectomy.

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The aim of this study was to find out the different criteria of selection, the method of tonsillectomy and the postoperative analgesia used by practicing otolaryngologists in Saudi Arabia.

METHODS

A questionnaire was sent to 185 practicing otolaryngologists from all of the provinces of Saudi Arabia.

The questionnaire consisted of the following:

1. The indications to operate from the history.
2. Signs and symptoms
3. The reliability of history given by parents.
4. Importance of history in decision making.
5. Indications for tonsillectomy.
6. Minimum and maximum age for tonsillectomy.
7. Whether adenoids were routinely removed along with the tonsils.
8. Is long term antibiotic therapy an alternative to tonsillectomy?
9. Is tonsillectomy performed more or less nowadays?
10. Method of tonsillectomy favoured by the participant.
11. Safest method of tonsillectomy according to the participant.
12. Fastest method of tonsillectomy according to the participant.
13. Choice of postoperative analgesics.
14. Whether antibiotics are given postoperatively or not.

RESULTS

Out of 185 questionnaires sent, 104 (56%) responded.

Table 1. **Indications to operate from the history**

History	No (%)
Number of attacks	101 (97.1)
Number of years of attacks	88 (84.6)
Duration of attacks	82 (78.8)
Difficulty in swallowing	85 (81.7)
Difficulty in breathing	77 (74.0)
Use of antibiotics	78 (75.0)
Absenteeism from school	73 (70.0)
Poor general health	62 (59.6)
Poor appetite	59 (56.7)

N=104

Table 1 shows the indications to operate from history and Table 2 shows the clinical features on which the respondents made their decision to operate. The most common indications for tonsillectomy are shown in Table 3 with recurrent tonsillitis being the most common. The numbers of attacks per year that justify tonsillectomy are shown in Figure 1. Sixty two per cent of the respondents considered 5-6 attacks a year as a justification for tonsillectomy.

Table 2. **Signs that are considered as an indication for tonsillectomy**

Signs	Yes (%)
Symptomatic large tonsils	99 (95.2)
Cervical lymphadenitis	77 (74.0)
Congested anterior pillars of Fauces	64 (61.5)
Presence of debris in the Tonsillar crypts	62 (59.6)
Fibrotic tonsils	45 (43.3)
Congested tonsils	29 (27.9)
Presence of large number of Tonsillar cyrpts	27 (26.0)
Thin body build	10 (9.6)
Asymptomatic large tonsils	8 (7.7)

N=104

Table 3. **Indications for tonsillectomy**

Indication	Yes (%)
Recurrent tonsillitis	96 (92.3)
Peritonsillar abscess	78 (78.5)
Sleep apnoea syndrome	
Rheumatic fever	66 (63.5)
Recurrent acute otitis media	63 (60.6%)
Recurrent secretory otitis media	54 (51.9)
Strentococcal carrier	51 (49%)
Glomerulonephritis	51 (49%)
Halitosis	50 (48%)
Chronic suppurative otitis media	54 (51.9%)
Diphtheria carrier	49 (47.1%)
Tonsillolith	48 (46.1%)
Poor appetite	45 (43.2%)
Cervical lymphadenitis	44 (42.3%)
Cor pulmonale	43 (41.7%)
Recurrent sore throat	33 (31.7%)
Recurrent sinusitis	31 (29.8%)

N=104

Figure 1. Number of attacks per year that would justify tonsillectomy

Ninety one (86.5%) of the participants considered the history to be important in decision making and 75 (72%) of them thought the history given by the parents to be reliable. Only 23 (22%) of the respondents considered long term antibiotics as an alternative to tonsillectomy in adults and 59 (56.7%) thought that tonsillectomy is performed more nowadays.

Of the total participants 58 (55.8%) said that they would remove the adenoids routinely when performing tonsillectomy. Tonsillectomy by dissection was favoured by 100 (96.2%) of those surveyed. Eighty eight per cent of respondents thought that tonsillectomy by dissection to be the safest and 57% of them thought it to be the fastest method.

Prophylactic antibiotics were prescribed by 68 (60.5%) of the otolaryngologists and paracetamol was the favourite postoperative analgesic among 69 (66%).

DISCUSSION

Celsius⁸ was the first to describe the indications for tonsillectomy in 45 AD. Hippocrates performed tonsillectomy by grasping the tonsil with a hook and excising it with a knife. Glover⁶ was the first to suggest that different surgeons vary in the importance they attach to particular signs and symptoms when they assess patients for tonsillectomy. Bloor et al⁹ agree with this conclusion and more recently Tucker⁷ in his survey of 28 consultants in Britain showed the difference of opinion that still exists regarding tonsillectomy. Recurrent tonsillitis was on the top of the list among ORL surgeons surveyed in Saudi Arabia, followed by peritonsillar abscess and sleep apnoea syndrome. This is in agreement with other authors^{10,11}.

Sixty two per cent of our respondents considered five attacks of sore throats a year to be significant when considering tonsillectomy and 45% of those thought that a period of two years to be sufficient. According to the recommendations of the American Medical Association and the American Academy of Pediatrics, four or more episodes are an indication for tonsillectomy¹². Kornblut and Kornblut, 1991¹³ suggest that attacks should be 3 or more a year and Richardson, 1999¹⁴ considers more than 6 attacks a year or 3 episodes per year for 2 years to be enough. The duration of the attack also varied although the majority (51.9%) agreed on 5-6 days.

The next common indication was peritonsillar abscess (75%) and Tucker⁷ reported a 22% rate among their respondents. However, tonsillectomy after a conservative management of peritonsillar abscess is no longer considered mandatory¹⁴.

The next indication was sleep apnoea syndrome (11.5%). Zalzal 1990¹⁵ considered upper airway obstruction with apnoea to be the most common indication for tonsillectomy in children below 3 years of age. Deutsch et al, 1996¹⁶ state that obstructive sleep apnoea and upper airway obstruction from adenotonsillar hypertrophy is either occurring more frequently or is becoming better recognized. According to Rosenfeld and Green, 1990¹⁷,

obstructive sleep apnoea accounts for an increasing percentage of tonsillectomies. Bluestone, 1992¹¹ also considered sleep apnoea as a definitive indication.

Seventy (67.3%) thought of rheumatic fever as an indication while 20 out of 28 of Tucker's study⁷ respondents favoured tonsillectomy for rheumatic fever. Others do not consider it as a valid indication for tonsillectomy¹⁰. However, tonsillectomy should be considered if rheumatic fever is associated with recurrent tonsillitis.

Absenteeism from school (70%), difficulty in swallowing (81%), poor appetite (56%), and poor general health (59%) were indications for tonsillectomy by our respondents. Absenteeism from school should be a consideration since it will interfere with the child's education. Similarly, lost working hours among adult patients have an economical implication.

Other complaints that were thought to be significant by our respondents are: frequent use of antibiotics (75%), difficulty in breathing (74%) and poor appetite (56%). The fact that there is no typical appearance of the tonsils in chronic tonsillitis is evident from the results of our survey. This is also evident from Tucker's survey⁷. Ninety nine (95.2%) of our respondents thought symptomatic large tonsils to be significant while 7.7% of them considered asymptomatic large tonsils to be significant. The clinical assessment of the size of the tonsils may not be a reliable criterion and the severity of the previous infection is not related to the size of the tonsils¹⁸. The degree of obstruction can change with body position and sleep, being more pronounced when the patients is recumbent or during sleep¹¹.

Seventy four per cent (74%) of our respondents considered cervical lymphadenopathy to be significant when considering tonsillectomy. However, it is worth remembering that 75% of normal children have palpable cervical lymph nodes¹⁹.

Other significant appearances were: congestion of pillars of fauces (61.5%), presence of debris in the tonsillar crypts (59.6%), and fibrotic tonsils (43.3%).

The decision to perform tonsillectomy is dependent on taking a careful history¹³. This view was supported by 87.5% of our respondents and 72% of them thought that the history given by the parents is reliable.

Three and fifty years were thought to be the minimum and maximum age for tonsillectomy respectively. The majority (55.6%) of our respondents considered removing the adenoids routinely along with the tonsils. According to Blum and Neel, 1983¹⁰ these are two distinct entities and procedures and should be performed together only when specific indications for each coexist. Even though adenoidectomy prolonged the operating time and increased the intra-operative blood loss, the procedure in general remained relatively safe. However, adding adenoidectomy to tonsillectomy should always be carefully considered²⁰. When asked whether long-term antibiotic therapy can be considered as an alternative to tonsillectomy, 75% of the respondents said "no". Stafford et al²¹ suggested that adequate treatment provides equally good alternative to

tonsillectomy in the majority of cases. However, Laing and McKerrow ,1991²² " make a plea for sympathetic consideration of requests of adults suffering from chronic tonsillitis".

Tonsillectomy by dissection was the favourite (96%) among the respondents and 88% of them considered it to be the safest method. Tonsillectomy has seen modified over the years and alternate procedures were described. These include electrocautery, laser, ultrasonication, bipolar scissors tonsillectomy and radiofrequency ablation.

Linden et al, 1990²³ reported that the dissection method of tonsillectomy was found to result in the least morbidity in pediatric age group. The use of prophylactic antibiotics was favoured by 75% of our respondents. Colreavy et al, 1999²⁴ found that there is considerable less morbidity in children receiving postoperative antibiotics compared to those who did not. Paracetamol was the analgesic of choice postoperatively in 64% of the respondents.

CONCLUSION

Indications of tonsillectomy still remain a controversial topic. The view of practicing otolaryngologists in Saudi Arabia in reference to indications, and methods of treatment seem to be in line with the internationally accepted standards. Recurrent tonsillitis remains the most common indication and the dissection method of tonsillectomy is considered the most common and safest method.

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