

Chronic Tonsillitis - Clinicopathological Evaluation and Justification for Surgery

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SUMMARY

Sixty four patients who underwent tonsillectomy. Cultures taken from the surface and core of tonsils. B-Haemolytic Streptococcus was cultured obtained from surface in 25% cases, whereas, 28% from the core, without a significant difference. Staph. Aureus was obtained from surface in 17% while 33% from core with a significant difference. Another significant difference was that there was no growth in 12 cases (19%) from the surface while 10 out of these 12 patients showed growth of pathogens (staph. aureus and B-haemolytic streptococcus) from the core of the tonsils which is also significant. The tonsils were sent for histopathological examination as well. Chronic inflammation was seen histopathologically, in all cases. There was improvement in general health and local symptoms after tonsillectomy.

INTRODUCTION

Chronic Tonsillitis is a common disease and tonsillectomy is still one of the commonest operations performed in the world^{1,2}.

It has been shown previously that the micro-organisms obtained from the surface and core culture are different^{3,4}. So treatment according to the surface culture may be unreliable. The presence of micro-organisms in the core of the tonsils, at the time of tonsillectomy in the absence of infection clinically, means that causative organisms are present and the antibiotic did not reach the core organisms. The cure is only possible in these cases by tonsillectomy. Histopathological study of the tonsils in these patients showed chronic inflammation in all cases². By removing the focus of chronic infection there is improvement in general health of the patients and also in breathing and swallowing of food and fewer attack of upper respiratory tract infection.

This study was carried out to find the prevalence of various organisms on the surface and core of the tonsil, the histopathology of the tonsils removed and the effect of tonsillectomy as well.

MATERIALS AND METHODS

Sixty four patients were studied, who had to undergo tonsillectomy at the Shaikh Zayed Hospital Lahore. Age of the patients ranged 3-33 years. 35 of them were male and 29 female.

The duration of the symptoms ranged from 2-12 years. Most of the patients i.e 32 (50%) were subjected to tonsillectomy because of recurrent episodes of sore throat associated with fever. Symptoms of the patients were, as shown in Table 1.

Large tonsils interfering with breathing and or swallowing were the next indication i.e. 25 patients (40%).

A swab was taken from the tonsil surface before surgery and another swab from the core of the tonsils immediately after tonsillectomy. Both of these swabs were sent for aerobic as well as anaerobic culture.

The tonsil tissue was then fixed in formalin and subjected to histopathological examination.

RESULTS

Analysis of the tonsilar bacterial culture gave results shown in Table 2. The predominant pathogens

Table 1: Complaints.

<i>Complaints</i>	<i>Number</i>	<i>Percent</i>
I Recurrent tonsillitis with fever	32	50
II Recurrent Tonsillitis + Respiratory Obstruction	16	25
III Recurrent Tonsillitis + Respiratory Obstruction + Dysphagia	9	14
IV Recurrent Tonsillitis + Persistent Cervical Lymphadenitis	7	11
Total	64	100

other significant difference was that there was no growth in 12 patients (19%) from the surface, while only 2 patients (3%) showed no growth from the core culture, as shown in Table 2.

Histopathological study of the tonsils showed chronic non specific inflammation with lymphoid follicular hyperplasia. Blood loss during tonsillectomy was between 40-100ml, average being 65 ml. Average time for operation was $\frac{1}{2}$ hour. Only 1 patient developed mild reactionary haemorrhage.

Postoperative follow-up of the patients showed definite improvement in general health, with better eating and breathing and fewer attacks of sore throat.

DISCUSSION

Table 2: Results obtained from surface and core culture of tonsils.

<i>Micro-organisms</i>	<i>Surface culture</i>		<i>Core culture</i>	
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
Aerobes				
B-Haemolytic Strep.	16	25	18	28.1
Staph. aureus	11	17.2	21	32.8
Neisseria catarrhalis	10	15.6	8	12.2
Strep. Pneumoniae	6	9.4	7	11
Strep. Viridans	4	6.3	1	1.6
H. Influenzae	4	6.2	5	7.8
Anaerobes				
Actinomycetes	0	0	2	3.1
Yeast				
Candida albicans	1	1.6	0	0
No Growth	12	18.7	2	3.1
Total	64	100	64	100

were B-Haemolytic streptococci and staph. aureus¹. B-Haemolytic streptococci were obtained from the surface in 25% cases, while 28% from the core, which is not a significant difference, but staph. aureus was obtained from the surface in 17%, while from the core in 33% which is a significant difference. The

Tonsillectomy and adenoidectomy in any age is controversial and polarised views exist between otolaryngologists and paediatricians². The presence of core organisms in the absence of clinical infection and the histopathological finding of chronic inflammation in the tonsil in all cases suggest tonsillectomy, the only cure in chronically infected cases.

The presence of different organisms on the surface and in core of the tonsils means that treatment on the basis of culture of swab from the surface may be misleading.

This study also shows that the antibiotics can not kill all the organism inside the tonsil because the antibiotic does not reach the core due to the presence of septa and fibrosis as a result of chronic inflammation¹.

The main reason for tonsillectomy is recurrent sore throat fever, followed by chronic tonsillitis with obstructive symptoms (including snoring and sleep apnoea) and recurrent sore throat with persistent cervical lymphadenopathy.

Follow-up of the patients showed definite improvement in general health with better eating and breathing and fewer attacks of mild sore throat without fever.

Blood loss was on average 65 ml and only one patient had mild reactionary haemorrhage - which did not need transfusion.

(Tonsillectomy - gives good results and the operation is justified).

REFERENCES

1. Zia MR, Butt MI. Chronic tonsillitis. Pak J Otolaryngol 1994; 11: 80-82.
2. Tekalan SA, Oztas U et al. Chronic tonsillitis - clinical, microbial and histopathological evaluation. Pak J Otolaryngol 1992; 8: 192-96.
3. Akturk T, Akiner MN, et al. Comparison of core and surface cultures in chronic tonsillitis. Pak J Otolaryngol 1991; 7: 158-60.
4. Talaat AM, Elwany S, et al. Oropharyngeal Bacterial flora before and after Tonsillectomy. Pak J Otolaryngol 1991; 7: 4-7.

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