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Indications for Tonsillectomy: Position Paper ENT UK 2009

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Introduction

This is a short paper produced by ENTUK to define the current position of tonsillectomy as a surgical procedure in terms of the indications, predicted outcomes and benefits of surgery. This document is based on the available evidence and references are available to support its conclusions.

Description of Tonsillitis

Tonsillitis is an acute infection of the palatine tonsils. Episodes last for 5 to 14 days, during which the patient experiences some or all of the following: fever, malaise, nausea, severe throat pain, white spots on the tonsils, enlarged lymph glands in the neck (and sometimes abdomen). The attacks are common in children and their frequency may reduce with age, but the loss of time at school – usually 3 to 5 days per attack, several times per annum – can impact significantly on education. Tonsillitis is not as common in adults, but attacks can be as frequent and even more severe than in children and may cause significant loss of work due to illness. A severe complication of tonsillitis arising mainly in adults is peritonsillar abscess or **quinsy**, and this condition often requires hospital admission for treatment and pain control.

The cost of tonsillitis

The economic impact of tonsillitis is considerable. Annually, 35 million days are lost from school or work due to sore throats in the UK. GP consultations for sore throat cost around £60 million annually.

Indications for surgery

Tonsillectomy, the removal of the palatine tonsils, has three principal indications.

1. Recurrent attacks of tonsillitis (typically Streptococcal).
2. Enlarged tonsils causing obstruction of the airway, which may be the cause of Obstructive Sleep Apnoea – recurrent airway obstruction at night – and this has serious effects on health and wellbeing.
3. Possible malignant disease in the tonsils – typically squamous carcinoma or lymphoma.

For many years the UK guidance on tonsillectomy for tonsillitis has been only to consider surgery in those with attacks of at least moderate severity (several days' duration) per annum, for > 1 year – the SIGN guidance summarises the current consensus ¹:

Patients should meet all of the following criteria:

- sore throats are due to tonsillitis
- five or more episodes of sore throat per year
- symptoms for at least a year
- episodes of sore throat are disabling and prevent normal functioning

Those with very frequent infection (>8 per annum) or who are hospitalised with extremely severe tonsillitis or peritonsillar abscess (quinsy) may seek intervention within a year of symptom onset. Very similar guidance has evolved independently in the USA and Australia.

Changing practice

In the 1950s there were about 200,000 tonsillectomies performed a year. In the last 15 years the rate of tonsillectomy has fallen in all age groups from 77,604 in 1994-95 to 49,187 in 2008-09², a 37% reduction. In children, the Department of Health identified almost 56,000 childhood tonsillectomies in 1994-95. By 2008 – 09 HES data show under 27,400 tonsillectomies in those aged ≤ 15 years. Of these, an estimated 25% were for enlarged, obstructive tonsils, the remainder for infection. In adults there were just under 22,000 tonsillectomy procedures in 2008-09, the majority for persistent tonsillitis. The reason for the reduction in the rate of surgery is because surgeons have used the data available to refine the indications for surgery so that the operation is now only offered to patients most likely to benefit.

Increasing hospital admissions for tonsillitis and quinsy

There is now a risk that too few tonsillectomies are being carried out. An increasing number of adults and children are being hospitalised annually for throat infections. In 2000-01, there were 30,942 tonsil-related admissions for medical treatments. By 2008-09, the figure had risen to 43,641 medical admissions for throat symptoms, an increase of over 41% (12,700 admissions in England) in 8 years. The incidence of admissions for quinsy is also rising - 6,352 admissions in 2000-01, rising to 7,683 in 2008-09, an increase of 1,331 admissions (over 20%), with a total of 11,865 bed days². Quinsy is an extremely painful and debilitating complication of acute tonsillitis, which requires intraoral drainage in the fully conscious patient, followed by admission for intravenous antibiotic therapy. These conditions are cured by tonsillectomy and as tonsillectomy rates fall it is predictable that hospital admissions for severe tonsillitis and its complications will rise, and this is borne out by the data available. Any further reduction in the rate of tonsillectomy is likely to be associated with increases in hospital admissions for tonsillitis.

Alternative Treatment

Antibiotic treatment is the standard treatment for acute bacterial tonsillitis, but the evidence is that increasing this treatment is likely to be neither good medical practice nor cost effective. Recent UK analysis of a million cases of sore throat treated in the 1990's showed a significant reduction in quinsy by the use of antibiotics – odds ratio 0.84³ - but due to the relative incidence of sore throat and quinsy, the number needed to treat was 4,300, and the use of antibiotics for all sore throats remains hard to justify. For recurrent sore throat, indiscriminate use of antibiotics by GPs is well documented as serving mostly to increase re-attendance rates⁴.

Benefits of Tonsillectomy

Published data using generic and disease specific patient reported outcome measures on both sides of the Atlantic confirm the marked health status benefits in children⁵⁻⁸. These include both significant benefits in the general health perceptions, parental impact and family activities reported by over 90% of parents. The quality of life benefits in adults are likewise unequivocal (large effect size improvements in health care utilisation, swallowing, and breathing, as well as general health related quality of life physical functioning).

About one in five tonsillectomies in England are performed for tonsillar enlargement, which is associated with Obstructive Sleep Apnoea (OSA). OSA is a potentially life threatening condition and is the main indication for tonsillectomy in approximately 25% of UK children. - Adenotonsillectomy is curative in 75 to 80% of cases of OSA. In the USA, the performance of adenotonsillectomy for obstruction has increased markedly in the past 30 years from 12% in the early 1970's to 77% in 2000-2005⁹. It is to be hoped that national drives to promote healthy lifestyle in children will prevent the UK ever experiencing such an epidemic, as Obstructive Sleep Apnoea has a well documented, huge impact on childhood quality of life. The proportion of adults undergoing tonsillectomy for obstructive symptoms (2171 in England in 2007-08) is under 10%, possibly due to lower levels of morbid obesity than in the USA.

Conclusion

Tonsillectomy remains a highly effective intervention in appropriate patients, not only in elimination of severe sore throats or upper airway obstruction, but also in terms of patient and parent reported quality of life. There are no data to suggest that the procedure is overused or abused in the UK. Tonsillectomy rates are lower in the UK than in any other country in Europe. In fact the trends of increasing hospitalisation for quinsy and severe forms of tonsillitis might indicate that rather than performing too many tonsillectomies in the UK, we are now performing too few.

References

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