

## **Tonsillectomy (Tonsillotomy and Coblation)**

Tonsillectomy is still one of the commonest operations undertaken in the UK. Both adults and children undergo tonsillectomy but often for different reasons.

Recurrent Tonsillitis is an unpleasant and usually bacterial infection and remains a common indication for surgery. The governmental NICE organisation gives advice on the number of infections that might warrant tonsillectomy. Recurrent infection over several years is the usual indication. This is particularly the case for young children who may often have a bad 12 or 18 months of problems, that then settles. However this general guidance always needs to be matched to an individuals specific history and circumstance.



Tonsillitis causes pain, reddening and swelling of the tonsils often with white spots and associated with a temperature. Patients often feel unwell and the infection may last several days. Tonsillitis is usually a streptococcal bacterial infection and may require penicillin to help settle it. Minor episodes will probably just settle with time and over the counter pain killers (paracetamol and ibuprofen).

Tonsillitis can progress. Quinsy is an abscess that may form behind a tonsil and causes a particularly painful infection, recurrent quinsy is often a certain indication for tonsillectomy.



Large tonsils are often the cause of obstructed breathing or significant snoring. Sometimes they are big enough to cause Obstructive Sleep Apnoea (OSA). In OSA the levels of oxygen dip when the patient sleeps in association with heavy snoring. It is rare for this to cause serious concern but OSA or degrees of obstructed breathing are commonly seen in adults and children. This is usually cured by Tonsillectomy with the probable addition of Adenoidectomy in children. It is rare to encounter problems requiring the need for High Dependency nursing or Intensive Care with good anaesthesia and patient selection. (see references below), but severe cases may need additional measures.

An alternative to tonsillectomy, particularly in small children is Tonsillotomy or partial tonsil removal. Tonsillotomy allows for removal of enough tonsil tissue to improve the breathing, and probably is less painful and may have a reduced risk of blood loss. This surgery is often best suited to use of the Coblator (see later).



Tonsils can also cause Halitosis or bad breath. This may be associated with the production of Tonsil Stones or Liths. These are white cheesy deposits that grow in the crypts or holes that reside within the tonsil. Only Tonsillectomy cures tonsil stones or liths. Sometimes tonsil stones can be associated with cyst formation within the tonsil.

Tonsillitis can also be associated with flare ups of skin diseases such as psoriasis. Although not widely known tonsillectomy can be helpful in controlling varieties of psoriasis. I published a research article about this in 1999.(see references below)

Tonsils can be asymmetrical, occasionally this might suggest a change in the tonsil. If concern is significant tonsils are removed and examined to exclude disease such as lymphoma. Cancer of the tonsil can also be found in adults and remains uncommon but along with other oral cancers its frequency is increasing. The commonest cause of tonsil asymmetry is just one tonsil hanging in a different lower position (tonsil prolapse). Sometimes however may still require tonsillectomy to improve and cure the problem.

Tonsillectomy in adults and children is usually performed as a day case procedure under general anaesthetic. The operation can be done in several ways. The evidence is that a 'cold cutting' method is safer and better method than other techniques such as Laser or hot diathermy surgery. My preferred technique is to use a haemostatic guillotine where I can. This technique has been shown to be less painful in children and is definitely quicker and less traumatic in my hands. I have used this technique thousands of times over 30 years, and I remain convinced that it is the best method (see references below) of tonsillectomy. A guillotine tonsillectomy is an intracapsular technique of surgery and thus has less pain and bleeding risks. Other methods of intra capsular tonsillectomy include the use of Coblation dissection (see later).

Tonsillectomy however gives patients a sore throat that can be severe. Nobody enjoys tonsillectomy but most patients (and/or parents) are glad they went through it to free them from recurring infection and illness. Painkillers help after surgery but sore throat may take up to 10 days to improve. Adult patients require 2 weeks away from work. Children may return to school in less time.

After tonsillectomy it is essential for both adults and children to eat and drink. Normal food and a normal diet is best, jelly and ice cream are not particularly beneficial. Eating ice-lollies and ice pops however has been shown scientifically by my team to help control postoperative pain. Adults who are not hungry might benefit from chewing chewing-gum. Keeping swallowing helps reduce the risk of infection and further bleeding. This can occur for up to 10 days post surgery. Children probably heal quicker than adults. It is best to try eating at first only 30 minutes after taking painkillers.

Painkillers help after surgery. It is usual to take both paracetamol and ibuprofen together and regularly for several days. Codeine is no longer recommended for children. Tonsillectomy can cause referred pain felt as ear ache. This is not unusual and does not imply infection.

The tonsil beds in the back of the mouth usually develop a white covering after a couple of days. This is normal and does not suggest infection. After about 7-10 days this comes away and a healthy pink lining has grown under it. At this point the sore throat reduces significantly.

Although pain reduces steadily after surgery, it sometimes, usually in adults, will peak again after 5-7 days before then reducing again.

The risks of surgery are mainly bleeding and infection. So long as patients eat and swallow well after surgery these complications are rare. It doesn't matter what you eat, normal consistency food is recommended. Some degree of bleeding or need to be reviewed can arise in up to 5% of cases. My personal experience is that significant problems are much much less frequent. Operations done through the mouth also run the risk of dislodging weak or loose teeth and a small risk to splitting or cutting the lips

Coblation is a method of removing tonsils using high frequency energy to create a cutting plasma field to dissect or vaporize tonsil tissue. This method is gaining increased popularity. Coblation is particularly useful for Sub total tonsil removal

or Tonsillotomy. This is useful particularly for small children when tonsil reduction is required to improve breathing as in the treatment of obstructive sleep apnoea. Tonsillotomy has reduced pain and risks of blood loss are reduced. There is of course the possibility that partial tonsil removal leaves tonsil tissue that may cause infection at a later date.

Coblation can also be used for intracapsular (near total) or extra capsular (traditional) tonsillectomy in adults and children. Initial reduced pain is claimed. The risk of bleeding is now thought to be similar to traditional techniques of surgery.

## References

Int J Pediatr Otorhinolaryngol. 2000 Jan 30;52(1):25-9.

### **Tonsillectomy by guillotine is less painful than by dissection.**

Homer JJ1, Williams BT, Semple P, Swanepoel A, Knight LC.

#### **Author information**

#### **Abstract**

Most tonsillectomies are carried out by dissection. Only a small minority of otolaryngologists still routinely perform guillotine tonsillectomy. We carried out a prospective study on 86 children undergoing tonsillectomy utilising a standard anaesthetic and analgesic regimen to compare post-operative pain after dissection tonsillectomy and guillotine tonsillectomy using a Popper's hemostatic guillotine. Guillotine tonsillectomy was significantly less painful ( $P < 0.001$ ) than dissection tonsillectomy. The relative risk of experiencing moderately severe to severe pain was 0.36 (95% CI, 0.18-0.72) in the guillotine group. A significant proportion of children experience moderately severe to severe pain despite a comprehensive analgesic regimen confirming that post operative pain remains an important issue after this operation. On the basis of our findings we advocate tonsillectomy by guillotine in children. The less pain that arises within the first 24 h may be particularly important if performing tonsillectomy as a day-case procedure.

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Clin Otolaryngol Allied Sci. 1997 Dec;22(6):532-5.

### **Streptococcal tonsillitis and its association with psoriasis: a review.**

England RJ1, Strachan DR, Knight LC.

#### **Author information**

#### **Abstract**

Lancefield group A streptococcal upper respiratory tract infections are well known to be precursors of a number of disease processes. That they frequently herald a first attack of guttate psoriasis or a reactivation of chronic plaque psoriasis is well recognized, though this is perhaps more true among dermatologists than otolaryngologists. This paper briefly summarizes the historical background, recent research into, and current understanding of the connection between the two pathological phenomena.

Rare disease

# Severe obstructive sleep apnoea due to adenotonsillar hypertrophy after liver transplantation

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## Summary

Epstein-Barr virus-related adenotonsillar hypertrophy is a precursor to post-transplantation lymphoproliferative disorder. We report a case of a 4-year-old child with severe obstructive sleep apnoea, who had liver transplantation at the age of 7 months. She had gross lymphoid hypertrophy in the oropharynx and supraglottis. We performed an adenotonsillectomy and aryepiglottoplasty which improved her symptoms. We emphasise the importance to consider the diagnosis of post-transplantation lymphoproliferative disorder in post-transplantation immunosuppressed patients who present with adenotonsillar hypertrophy.

*J Laryngol Otol.* 2008 Jan;122(1):42-5. Epub 2007 Apr 3.

## Obstructive sleep apnoea adenotonsillectomy in children: when to refer to a centre with a paediatric intensive care unit?

Blenke EJ<sup>1</sup>, Anderson AR, Raja H, Bew S, Knight LC.

### Author information

#### Abstract

##### OBJECTIVE:

To identify regional surgical referral patterns for adenotonsillectomy in children with obstructive sleep apnoea to our tertiary centre with paediatric intensive care unit facilities and to establish guidelines for elective paediatric intensive care unit referral and admission.

##### METHODS:

Two methods were used. A questionnaire was sent to ENT consultants in five surrounding hospitals with no in-house paediatric intensive care facilities. The second was a prospective observational study undertaken in our tertiary centre for a sub-set of patients undergoing obstructive sleep apnoea adenotonsillectomy between January 2002 and February 2005. These children were considered high risk as judged clinically by an ENT surgeon. Most had obstructive sleep apnoea and a co-morbidity. Otherwise healthy children with simple obstructive sleep apnoea were excluded.

##### RESULTS:

15 out of 20 consultants responded to the questionnaire. Four referred on the grounds of clinical history, five referred based on pulse oximetry, nine referred syndromal children and four did not refer electively. Of the 49 high risk patients operated on, only 12 required

paediatric intensive care admission with no emergency paediatric intensive care admissions. No otherwise healthy children with uncomplicated obstructive sleep apnoea symptoms required paediatric intensive care admission during the study period.

**CONCLUSION:**

There was no regional consensus regarding paediatric intensive care unit referral for obstructive sleep apnoea adenotonsillectomy. Clinical judgement without complex sleep studies by those experienced in this area was sufficient to detect complicated cases of obstructive sleep apnoea with co-morbidity requiring paediatric intensive care.

Clin Otolaryngol. 2011 Dec;36(6):566-70. doi: 10.1111/j.1749-4486.2011.02410.x.

**The use of ice-lollies for pain relief post-paediatric tonsillectomy. A single-blinded, randomised, controlled trial.**

Sylvester DC<sup>1</sup>, Rafferty A, Bew S, Knight LC.

**Author information**

**Abstract**

**OBJECTIVES:**

To assess whether the use of ice-lollies after tonsillectomy with or without adenoidectomy in children aged 2-12 reduces pain in the immediate postoperative period.

**DESIGN:**

A prospective, randomised, single-blinded study design consisting of two groups with an intention to treat analysis.

**SETTING:**

Tertiary referral centre.

**PARTICIPANTS:**

Children aged 2-12 undergoing tonsillectomy with or without adenoidectomy.

**MAIN OUTCOME MEASURES:**

Pain assessment by nursing staff in the form of the validated modified Children's Hospital of Eastern Ontario Pain Scale at 15, 30 and 60 min and 4 h.

**RESULTS:**

Ninety-two patients were recruited into the study with 46 allocated to receive an ice-lolly and 41 not to receive an ice-lolly after exclusion of those with incomplete data. The two groups were comparable for number, age, sex and diagnosis. The pain score at every time interval was lower in the group that had received the ice-lolly compared with the group that had not. This was statistically significant at 30 (P = 0.008) and 60 min (P = 0.049).

**CONCLUSION:**

Our data suggest that ice-lollies are a cheap, effective and safe method of reducing postoperative pain up to one hour following paediatric tonsillectomy.

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**Comment in**

RE: The use of ice lollies for pain relief post-paediatric tonsillectomy. [Clin Otolaryngol. 2012]

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