

A 10 year Review of Tonsillectomy in a Tertiary Centre

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Abstract

Tonsillectomy is a very common surgical procedure performed worldwide. We retrospectively reviewed the data on tonsillectomy in the past 10 years from 1996 to 2006. There were a total of 329 children undergoing tonsillectomy. The median age was 6.8 years. Two hundred and sixty (79%) children received tonsillectomy for obstructive sleep apnoea, 69 (21%) for recurrent tonsillitis. The average operative time was 1 hour and 4 minutes. Intraoperative complication included 1 dislodged endotracheal tube during surgery while postoperative complication included 8 (2.4%) secondary haemorrhage. The average length of stay in hospital was 2.5 days. Majority of children resumed soft diet on day 2 after surgery. Tonsillectomy remains a safe and important operation in the field of Paediatric Otolaryngology.

Key words

Obstructive sleep apnoea; Tonsillectomy; Tonsillitis

Introduction

The removal of tonsils dates back to two thousand years ago. Since 1700, surgeons had begun to excise tonsils. Although a long-practiced procedure, tonsillectomy is still an extremely common surgery and one of the most common operations performed in children. Studies had widely published on the benefit of tonsillectomy on the improvement of child's quality of life and as an important treatment of obstructive sleep apnoea.¹⁻³ However, there remains misunderstanding among parents regarding indications for surgery and details of postoperative recovery and morbidities.

Despite being a common surgery, there is a lack of epidemiological and clinical data published in Hong Kong.

We summarised our experience in tonsillectomy for paediatric patients in the past 10 years in a tertiary centre.

Method

Medical and operative records of children below 18 years of age undergoing tonsillectomy at Queen Mary Hospital from January 1996 to December 2006 were retrospectively reviewed. Demographic data, clinical indications, operative details, resumption of diet, hospital stay and postoperative complications were studied and analysed.

Results

A total of 329 children had undergone tonsillectomy between January 1996 and December 2006 at the Department of ENT, Queen Mary Hospital. There were 209 male and 120 female. The median age at tonsillectomy was 6.8 years. Forty-one percent was below the age of 5 and 17% below age of 3.

Indications for tonsillectomy had been evaluated. Two hundred and sixty (79%) children had surgery for treatment of obstructive sleep apnoea; while 69 (21%) was for recurrent tonsillitis. All surgeries were performed under

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Received 1 August, 2007

general anaesthesia. The average operative time was 1 hour and 4 minutes. Intraoperative complication included 1 dislodged endotracheal tube upon manipulation of the mouth gag. Postoperative complications included 8 (2.4%) secondary bleeding, all required surgical haemostasis. There was no hospital mortality.

Average length of stay in hospital was 2.5 days. Average time to resume soft diet was day 2 after surgery.

Discussion

Tonsillectomy was first described in 1000 BC in India. By the early twentieth century, the procedure has increased in popularity.⁴ It now remains one of the most common surgeries performed on children. In the past decades, studies had been widely published on the benefit of tonsillectomy in the treatment of paediatric obstructive sleep apnoea and improvement on quality of life.^{1,3} However, there are still misunderstanding among parents and paediatrician regarding the safety, recovery and morbidities of the surgery. We therefore reviewed our data on paediatric tonsillectomy in the past 10 years.

Indications for tonsillectomy include frequent tonsillitis with 3 or more attacks per year; obstructive sleep apnoea and chronic tonsillitis associated with streptococcal carrier state. We observed that the current trend for tonsillectomy is changing in the past decade. Up to 79% of tonsillectomy was indicated for obstructive sleep apnoea while only 21% was performed for infective tonsillar disease in the past 10 years. Analysis performed by our unit before 1995 showed that 62% tonsillectomy was performed for recurrent tonsillitis instead. This reversal may be due to the increase in awareness and better diagnosis of obstructive sleep apnoea by paediatrician and general practitioner in the past 10 years thus leading to increase in proportion of children receiving tonsillectomy for obstructive sleep apnoea.

The median age of tonsillectomy was 6.8 years in our review. There had been papers published on risks of tonsillectomy in very young children. We found that 41% of our tonsillectomy was performed below the age of 5 and 17% below the age of 3. Besides, studies have shown up to 20% of children with obstructive sleep apnoea have respiratory compromise requiring intervention in the postoperative period.²

Although we did not encounter complications among our very young patients and those with obstructive sleep apnoea, we do recommend high risks patients such as those with low body weight, failure to thrive and severe obstructive

sleep apnoea to have operations performed in centres with good intensive care support.

Surgical morbidities have been the main concern for parents, surgeons and anaesthetists.⁵ Our review showed a 2.4% postoperative haemorrhage which is acceptable compared to a recent British National Prospective Tonsillectomy Audit of 3.5%.⁶ Majority of our tonsillectomies were performed by the traditional cold steel method known as cold dissection. This has been published to have a relatively lower risk of postoperative haemorrhage compared to the 'hot' tonsillectomy by diathermy.⁷ However this issue is still surrounded by controversies. Besides traditional methods, we have performed newer techniques including the use of harmonic scalpel and coblation tonsillectomy. Many of these seek to provide better haemostasis and operative speed.⁸ Future studies will be needed to evaluate their use on our patients.

Another unwelcomed surgical morbidity for tonsillectomy is postoperative pain. This may lead to poor intake, dehydration and prolonged hospital stay. Studies have looked at postoperative medications on pain control such as the use of corticosteroid, local anaesthetics and non-steroidal anti-inflammatory drugs.^{9,10} Majority of our patients resumed adequate soft diet on day 2 after operation and the average hospital stay was 2.5 days. As our usual practice, intraoperatively we injected local anaesthetics and prescribed paracetamol as postoperative pain killer. Besides, we believe that accurate plane dissection during surgery is important to reduce postoperative pain and risks of bleeding.

Finally we are glad to report no surgical mortality. As with the misconception of reduction in immunity after removal of tonsils, our patients were not more or less susceptible to infections.

Conclusion

Tonsillectomy remains an important and safe operation for paediatric patients. Better understanding of the procedure by parents is mandatory.

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