

## Laryngeal mask or tube for tonsillectomy?

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Anaesthesia for ear, nose and throat (ENT) surgery poses a number of unique challenges for the anaesthetist. For many years airway management in ENT surgery required tracheal intubation. However, the advent of the laryngeal mask airway (LMA) provided anaesthetists with an alternative. So, LMA or tube for tonsillectomy?

### TRACHEAL INTUBATION

The use of preformed tracheal tubes for tonsillectomy has been the standard for many years. This has led to familiarity with the technique for surgeons and anaesthetists alike, which, in itself, can be considered as advantageous.

A survey of consultant anaesthetic practice shows that the use of tracheal tubes continues to be widespread (Hatcher and Stack, 1999). Surgeons are also happy with the use of tracheal tubes (Hern et al, 1999), citing ease of positioning of the Boyle–Davis gag, avoidance of subsequent obstruction, optimal surgical access and a greater mass of excised tonsillar tissue as benefits.

The use of cuffed tracheal tubes remains the gold standard for some patients, e.g. patients with low compliance, the morbidly obese and those at high risk of gastro-oesophageal reflux. These indications have been extrapolated to include shared access surgery with conditions of blood and tissue in the mouth.

Perhaps the most compelling reason for tracheal intubation is avoidance of

risk of transmission of infection. Department of Health guidelines concerning the transmission of new variant Creutzfeldt–Jakob disease (vCJD) highlighted the risk of cross infection with reusable surgical and anaesthetic equipment (Frosh et al, 2001). The prion, the causative agent of vCJD, has been found in lymphoreticular tissue, especially the tonsil. LMAs have been found to have protein on them even after sterilization.

Advice from the Royal College of Anaesthetists and the British Association of Otolaryngologists and Head and Neck Surgeons states that items used for tonsillectomies should be single use or disposed of after use.

### LARYNGEAL MASK

The introduction of the reinforced laryngeal mask (rLMA) gave clinicians a choice in tonsillectomy surgery.

The use of neuromuscular blockade to facilitate tracheal intubation, in particular suxamethonium with its well known side effect profile, can be avoided. This may be beneficial in a predominantly young and early ambulatory group such as tonsillectomy patients.

Some of the most striking benefits of the rLMA are apparent in the recovery and extubation phase. The rLMA provides a patent and partially protected airway, allowing administration of high concentration oxygen while providing protection against airway soiling from above (Williams and Bailey, 1993). It also provides an improved recovery profile in terms of lower incidence of coughing and straining, avoiding an increase in venous pressure which may lead to haemorrhage, and perhaps most importantly a reduction in the occurrence of laryngospasm with potentially dangerous levels of hypoxia.

Since a large proportion of tonsillectomies are performed in the paediatric population the use of uncuffed tracheal tubes is common and their ability to provide security from blood soiling may be questionable. Common practice is the deep extubation of this population rendering an anaesthetized patient with an unprotected airway.

### CONCLUSIONS

The introduction of the rLMA offers anaesthetists an alternative to tracheal intubation and is widely accepted. Concerns over the safety and surgical conditions of the rLMA may account for some of the initial resistance to its use. These can be overcome by careful positioning, fixation and selection of the correctly sized mask and Boyle–Davis gag. This has led to increasing popularity when combined with improved recovery and extubation profiles. However, possible infection transmission, most importantly vCJD, has led to resurgence in the use of tracheal tubes. The introduction of single use LMAs and hopefully the development of single use rLMAs may provide a solution to this dilemma. **HM**

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