

Oropharyngeal trauma during routine ear, nose and throat procedures

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Abstract

A prospective study of 122 adults undergoing routine ear, nose and throat (ENT) operations over a three-month period was carried out to determine the cause of oropharyngeal trauma seen in some patients. Those having tonsillar or palatal surgery were excluded from the study. Forty-five (36.9 per cent) patients complained of a mild sore throat post-operatively and six (4.9 per cent) of a severe sore throat. Five of these (4 per cent) had evidence of injury to the uvula and soft palate which delayed their discharge from hospital. No single cause of trauma was identified but possible factors included the use of laryngeal masks (two cases), throat packs (two cases) and blind suctioning with a plastic Yankauer sucker (one case). There is a relatively high risk of oropharyngeal trauma during routine otolaryngological procedures and we recommend that care should be taken to prevent this common cause of significant post-operative morbidity.

Key words: Uvula; Intraoperative complications

Introduction

Post-operative sore throat is a common finding after any type of surgery requiring a general anaesthetic. During ENT surgery there is often a risk of bleeding into the upper aerodigestive tract with the possible sequela of aspiration of blood into the lower airway. This has led to the use of cuffed endotracheal tubes and throat packs in appropriate situations. More recently laryngeal masks have been used for some operations. At the end of the operation blood and secretions are removed from the upper aerodigestive tract by suction to prevent aspiration. Trauma to the uvula and soft palate may occur as a result of these anaesthetic techniques with subsequent post-operative pain (Das and Thomas, 1980; Lee, 1989; Bogetz *et al.*, 1991; Larard, 1992; Ryder, 1992). We performed a prospective study of post-operative sore throats in ENT patients taking particular note of uvula trauma.

Materials and methods

One hundred and twenty-two consecutive adult patients undergoing elective ENT surgery were prospectively studied over a three-month period. Patients undergoing daycase procedures and those having tonsil or soft palate surgery were excluded from the study. At operation the following details were recorded: premedication, the operation performed, type of anaesthesia (mask, laryngeal mask, endotracheal tube), the use of a throat pack and the use and type of sucker.

On the first post-operative day each patient was asked about any symptoms of sore throat which were then graded as nil, mild or severe following the grading system

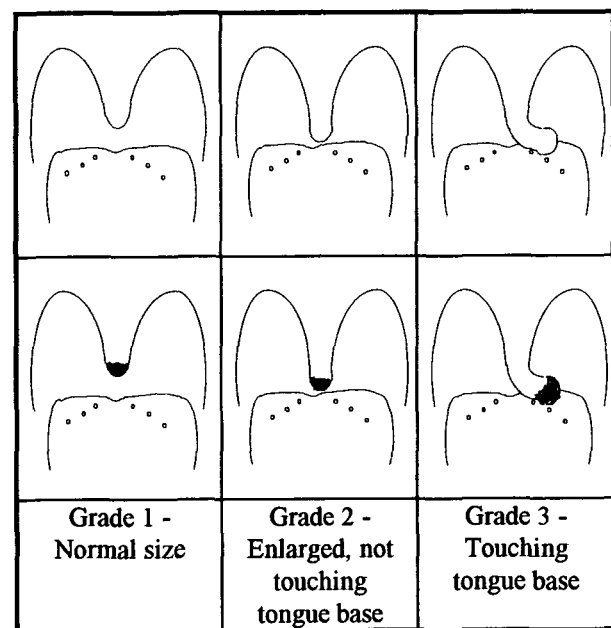


FIG. 1

Grading of uvula size: upper row, no ulceration, lower row, with ulceration.

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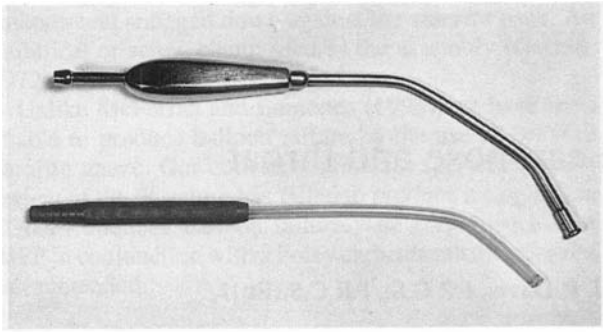


FIG. 2

Plastic disposable (bottom) and metal Yankauer (top) suckers.

of Harding and McVey (1987). The mouth was examined for signs of injury to the uvula, including swelling and ulceration. The presence or absence of swelling was graded as: grade 1, no obvious swelling; grade 2, enlarged but not touching the tongue base; grade 3, enlarged and touching the tongue base (Figure 1). The examination was repeated on the next post-operative day if the patient remained in hospital. Patients with a severe sore throat and evidence of uvula injury were seen one week after their surgery and their level of pain and the appearance of the uvula were again noted.

Results

One hundred and twenty-two patients were studied over a three-month period. There were 71 males and 51 females

with a mean age of 41 years (range 16–88 years). The operations consisted of nine ear procedures, 43 throat procedures and 70 nose procedures.

The premedication used was predominantly omnopon and scopolamine 116 (97 per cent) but pethidine and phenergan 4 (two per cent) and temazepam 2 (one per cent) were also used. The anaesthetist used a laryngeal mask in eight cases, a nasal cuffed endotracheal tube in 13 cases and an oral cuffed endotracheal tube in the remaining 101 cases. A throat pack was used in 60 of the nasal cases. Suction was used by the anaesthetist at the end of each operation. In 67 cases a plastic disposable Yankauer sucker was used and in the other cases the metal Yankauer sucker from the operating set was used (Figure 2). The metal sucker had a number of small holes at the tip in a 'rose' formation whereas the disposable sucker had a single larger hole at the tip with smaller holes to the side of this.

On the first post-operative day 45 (36.9 per cent) of the patients complained of mild throat discomfort and six (4.9 per cent) complained of severe pain in the throat and needed stronger analgesia. The operations in this latter group comprised four nasal procedures and two endoscopies. All six remained in hospital for an extra one to two days because of the pain. Five of the patients had grade 2 swelling of the uvula with ulceration. The remaining patient had had a rigid oesophagoscopy, laryngoscopy, and biopsy and the pain was thought to be due to this instrumentation. The post-operative appearance of the uvula was normal in this patient. In the five cases in which there was significant trauma to the uvula, the cause was thought to be due to the use of laryngeal masks (Figure 3)



FIG. 3

Photograph of the trauma to the uvula and soft palate (grade 2) after a submucous diathermy operation in which a laryngeal mask was used.

(two cases), throat packs (two cases), or blind suctioning with a plastic Yankauer sucker (one case) but no definite causal relationship could be established.

Of the 45 cases in which patients complained of mild sore throat there were one ear, nine nasal and 35 throat operations. Of these cases there was evidence of uvula swelling (grade 2) without ulceration in seven of the nasal procedures and one of the throat procedures. Throat packs had been used in five of the nasal procedures and a laryngeal mask in two cases. Blind suctioning had been performed after the throat operation. The mild throat discomfort was easily controlled with oral analgesia and did not delay the patients' discharge from hospital.

Discussion

This is the first prospective study to our knowledge, of the incidence of oropharyngeal trauma during routine ENT procedures. Five patients (four per cent) in the series suffered significant injury to the uvula which required additional analgesia and delayed their discharge from hospital. The cause of this damage to the uvula may have been due to the use of laryngeal masks (two cases), throat packs (two cases), or blind suctioning with a plastic Yankauer sucker (one case). Swelling of the uvula without ulceration did not seem to cause severe pain.

The findings are consistent with previous case reports which have identified the use of laryngeal masks (Lee, 1989), throat packs (Larard, 1992; Ryder, 1992), and blind suctioning (Das and Thomas, 1980; Stubbing, 1990; Bogetz *et al.*, 1991) as causes of uvula trauma. Trauma caused by laryngeal masks may be avoided by careful attention to technique when inserting the mask (Brain, 1989). Blind suction should be avoided where possible. In addition the plastic Yankauer sucker has a large bore and is able to suck the whole of the uvula into its lumen. This may cause more trauma to the uvula than the metal Yankauer sucker which has small suction holes and a rounded end.

A number of other factors may be implicated in mild to moderate post-operative throat pain. In our study the main premedication was omnopon and scopolamine (97 per cent). Anticholinergic premedication is used routinely by 67.8 per cent of anaesthetists (Mirukhur *et al.*, 1978). This type of premedication may predispose to drying and soreness of the throat (Valentine *et al.*, 1990). The type of anaesthetic tube (Conway *et al.*, 1960; Jensen *et al.*, 1982) and the length of the operation (Edmonds-Seal and Eve, 1962; Riding, 1975) may also be important.

Whilst we were unable to identify any single cause for the oropharyngeal trauma seen in our study, it is clear that there is a relatively high risk (four per cent) of oropharyngeal trauma during routine otolaryngological procedures. We recommend that both surgeons and anaesthetists should take care to minimize trauma to the soft palate at all stages of surgery in order to prevent this common cause of significant post-operative morbidity.

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