CASE REPORT

Uvulitis following general anaesthesia

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SUMMARY

Uvular necrosis following endotracheal general anaesthesia is a rare complication. We report two cases of uvular and soft palate necrosis after atraumatic intubation with endotracheal tube and, in the second case, laryngeal mask airway.

BACKGROUND

Isolated uvular necrosis following endotracheal intubation or laryngeal mask airway (LMA) intubation, first reported in 1978 and 1989, respectively, is a rare complication.^{1–7} It is usually ascribed to ischaemia of the uvula as a result of its impingement between a midline tube and hard palate or trauma from overzealous suctioning of the oropharynx. The recommendations are, therefore, to avoid blind suction and to place the tube to one side.^{1–7} We report two such cases as well as necrosis of the soft palate and tonsillar fossa.

CASE PRESENTATION

Case 1

A 64-year-old man underwent uncomplicated bilateral ptosis repair, upper and lower lid blepharoplasty and fat transfer to the face was performed under general anaesthesia (GA) with endotracheal intubation. His height was 180 cm and he weighed 76 kg at the time of operation. He was on treatment for hypercholesterolaemia and gastro-oesophageal reflux and had no allergies. He was a non-smoker with no history of recent upper respiratory tract infection.

He was anaesthetised using propofol, remifentanyl and atracurium. Intubation was grade 1 and atraumatic using a size 8 Ring-Adair-Elwyn (RAE) endotracheal tube. The cuff pressure was not routinely measured but it was just adequate to stop leakage of air. Suction was used under direct observation. During anaesthesia, dexamethasone, ondansetron and cefuroxime were administered. The operation was completed successfully. He was awakened and extubated routinely.

On the first postoperative day, his face was recovering well but he reported that his uvula was 'three inches down the back of his throat' and eating and drinking was extremely difficult. He had no respiratory distress and was non-feverish. The uvula was swollen and elongated with erythema of the surrounding mucosa (figure 1). There was no cervical lymphadenopathy.

He was treated with a course of oral ciprofloxacin, paracetamol, ibuprofen and local anaesthetic spray. His symptoms resolved in 10 days.

Figure 1 Shows elongated and swollen uvula with ulcerations.

Case 2

A 44-year-old man underwent endoscopic septoplasty under GA. He had no other medical history or allergies. His height was 182 cm and he weighed 82 kg. He was a non-smoker with no recent history of upper respiratory tract infection.

He was anaesthetised using a propofol and remifentanyl targeted controlled infusion. A size 5, flexible LMA was inserted routinely and secured. A throat pack was not inserted. During anaesthesia, dexamethasone, ondansetron, paracetamol, diclofenac and morphine were administered. Following uneventful surgery, he was awakened and the laryngeal mask removed after gentle suction of the oropharynx.

Five days later, the patient reported of an excruciating pain in his oropharynx, which failed to respond to standard analgesia. He was non-feverish. The examination showed extensive ulceration involving uvula, soft palate and tonsillar fossae as well as normal postoperative nasal oedema (figure 2). There were no other abnormalities. His throat culture was negative.

He was reassured and started on a course of oral coamoxyclov, diclofenac, codeine phosphate, aciclovir and chlorhexidine mouthwash. His symptoms resolved in 2 weeks.

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Figure 2 Shows ulcerations on uvula, soft palate and tonsillar fossae.

OUTCOME AND FOLLOW-UP

Both patients made a full recovery with the conservative treatment within 2 weeks.

DISCUSSION

This case series highlights the importance of considering uvulitis in the differential diagnosis of a postoperative sore throat following GA. To the best of our knowledge, ulceration and necrosis of the soft palate and tonsillar fossae in addition to uvulitis following LMA, as seen in our second case, has not been reported. There was no direct trauma during anaesthesia in either of the cases and the experienced anaesthetists attending were aware of this complication and naturally attempted to prevent it. In neither of the cases was any form of pressure put on the tube. The first patient underwent eyelids' surgery away from the tube and the second patient underwent endoscopic septoplasty without any direct pressure on the face.

Emmett *et al*⁸ have recently reported on a case of uvular necrosis following LMA intubation. They suggest that male patients may be at a higher risk of this complication due to the structure of their upper airways.

Other reported causes of uvulitis are infections and less commonly angio-oedema or inhalation of recreational substances.^{9–11} Our patients had neither the relevant history nor any respiratory distress or systemic signs of infection. The second patient had a negative throat culture and improved despite systemic antibiotics excluding candida infection.

Our cases demonstrate that inflammation and ulceration of midline oropharynx structures can occur following GA with a tube or LMA in the absence of direct trauma or infection and presumably secondary to compression ischaemia. Therefore, although sore throat following GA is a common symptom,¹² any severe or non-resolving pain should be assessed to exclude uvulitis. Analgesia and anti-inflammatory therapy is mandatory as the pain is severe. Antibiotic treatment remains controversial, since there is no evidence that this condition is infectious. However, the prevention of secondary infection should be

considered and therefore wide-spectrum antibiotic prophylaxis may be indicated. This statement also applies to antiviral therapy but regardless of the choice of treatment, this condition appears to resolve in approximately 2 weeks from its onset.

Incidentally, both patients used smart phone cameras to take pictures of their throats and emailed the images to us, which prompted the clinical examination. Modern technology allows easier communication with unidentifiable images to exclude complications when managing a patient with a postoperative sore throat.

Learning points

- ▶ Uvulitis should be considered in the differential diagnosis of severe or non-resolving post-operative sore throat.
- ▶ Uvulitis can occur following general anaesthesia with laryngeal mask airway (LMA) and endotracheal tube even in the absence of direct trauma.
- ▶ Soft palate and tonsillar fossa necrosis can also occur in addition to uvulitis with LMA.
- ▶ Analgesia and anti-inflammatory therapy is mandatory as the pain is severe. Antibiotic and antiviral treatment is controversial but important to prevent secondary infection.

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REFERENCES

- 1 Ravindran R, Priddy S. Uvular edema, a rare complication of endotracheal intubation. *Anesthesiology* 1978;48:374.
- 2 Lee JJ. Laryngeal mask and trauma to uvula. *Anaesthesia* 1989;44:1014–15.
- 3 Evans DP, Lo BM. Uvular necrosis after orotracheal intubation. *Am J Emerg Med* 2009;27:631.e3–4.
- 4 Atkinson CJ, Rangasami J. Uvula necrosis—an unusual cause of severe postoperative sore throat. *Br J Anaesth* 2006;97:426–7.
- 5 Sanders M. An unusual method of diagnosing postoperative sore Throat. *Anaesthesia* 2001;56:296.
- 6 Commins DJ, Whittet H, Okoli UC. Postintubation uvular necrosis. *Anaesthesia* 1994;49:457–8.
- 7 Bogetz MS, Tupper BJ, Vigil AC. Too much of a good thing: uvular trauma caused by overzealous suctioning. *Anesth Analg* 1991;72:125–6.
- 8 Emmett SR, Lloyd SD, Johnston MN. Uvular trauma from a laryngeal mask. *Br J Anaesth* 2012;109:468–9.
- 9 Guarisco JL, Cheney ML, LeJeune FE Jr, *et al*. Isolated uvulitis secondary to marijuana use. *Laryngoscope* 1988;98:1309.
- 10 Kuo DC, Barish RA. Isolated uvular angioedema associated with ACE inhibitor use. *J Emerg Med* 1995;13:327.
- 11 Li KI, Kiernan S, Wald ER, *et al*. Isolated uvulitis due to Haemophilus influenza type b. *Pediatrics* 1984;74:1054–7.
- 12 Biro P, Seifert B, Pasch T. Complaints of sore throat after tracheal intubation: a prospective evaluation. *Eur J Anaesthesiol* 2005;4:307–11.

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