

## Sublingual Haematoma – A Rare Complication associated with Cleft Palate Surgery

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A 1yr old boy weighing 10 kg underwent cleft palate surgery. Post extubation, a swelling was noticed beneath the tongue which progressed gradually and obstructed the airway. Small sized endotracheal tube (ETT) was used as a nasal airway and advanced till it relieved the obstruction and child started maintaining SpO<sub>2</sub> >95%. Haemodynamic parameters were stable and child was shifted from OT to PACU where he was observed vigilantly for any airway obstruction. Swelling regressed over the next 2 days and the child accepted oral feeding eventually.

**Key words:** sublingual haematoma, cleft palate surgery, spontaneous resolution, post extubation, difficult airway

### Introduction

Post-operative respiratory complications are observed in 7.4% of cleft palate repair.<sup>1</sup> These complications include laryngospasm 3%, respiratory obstruction 2.3%, upper respiratory tract infection URTI 0.7%, bronchospasm 0.5% and epiglottic edema/ re intubation 0.1%.<sup>1,2,3</sup> Anaesthetic complications for cleft palate surgeries are mainly related to airway problems. This case report highlights an unusual complication, which occurred after cleft palate repair following extubation.

### Case report

We present a case of a one-year old child who presented to our hospital with a cleft palate (Fig. 1).



Fig 1- Pre operative view of cleft palate

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The child was posted for cleft palate repair. Following detailed pre-anesthesia check-up ruling out any congenital syndromes / coagulopathies, informed parental consent was taken and general anaesthesia was administered using inhalational induction with Sevoflurane and neuromuscular blockade was established using atracurium 5mg intravenously. Trachea was intubated with 3 mm uncuffed Ring Adair Elwyn (RAE) tube and an oral pack was inserted smoothly. After positioning, Dingman gag (Fig. 2) was used to have a clear field for surgery.



Fig 2-Dingman gag used during surgery



Fig 4- First post operative day

Surgery lasted for 2 hrs. Post extubation, a sublingual swelling was observed (Fig. 3) which gradually increased within seconds to minutes leading to respiratory obstruction following which 3 mm uncuffed polyvinyl chloride (PVC) endotracheal tube (ETT) was advanced through nares till obstruction was relieved.



Fig 3- Post extubation

Child was kept for observation in the operating theatre (OT) and shifted with nasal ETT in situ and oxygen supplementation to the Post Anaesthesia Care Unit (PACU). On the morning of the first postoperative day (Fig. 4), nasal airway was removed and child was allowed oral intake.

The child was kept in close observation post surgery. Size of the swelling gradually reduced and the patient was discharged on 5<sup>th</sup> postoperative day under stable condition and tolerating oral feeds.

#### Discussion

Extubation especially after upper airway surgery poses challenges due to a higher incidence of airway related complications, leading to desaturation and hypoxic injury. Postoperative period has higher chances of developing mucosal edema in any part of the airway especially following pharyngeal flap with palate repair or after surgeries lasting more than 2 hrs.

Upper airway obstruction in this case would have been due to sublingual swelling which occurred after release of Dingman gag. This soft tissue swelling from the floor of the mouth would have pushed the tongue backwards which led to upper airway obstruction. Other differential causes such as laryngospasm, lingual swelling, supraglottic edema and accidental left-over throat packs, aspiration of secretions or blood collected in the nasopharynx following reversal of head extension must all be excluded. Bell *et al* in 1998 suggested that excessive pressure exerted on the base of tongue by the retractor may produce glossal hematoma, venous stasis or lymphoedema.<sup>4</sup> Hyperextension of the head and Trendelenberg

position may also be contributive factors to impaired arterial flow and decreased venous drainage of the tongue.<sup>5</sup>

### Conclusion

We recommend thorough examination of the oral cavity post palatal repair so as to identify this complication early and prompt treatment to prevent any disastrous outcomes.

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