



TONGUE EDEMA AFTER CLEFT PALATE REPAIR : A CASE REPORT

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INTRODUCTION

Cleft palate is the most common craniofacial birth defect in the world that need repair before 15 months of age but not earlier than 7 months to get benefit speech without endangering growth. Post operative bleeding, infection, airway obstruction, allergies, tongue edema, flap necrosis, palatal fistula, velopharyngeal insufficiency were the common risk and complications following cleft palate repair.

OBJECTIVE

A 22 month old boy was brought to our hospital to perform palatoplasty for Palatognatoshizis Bilateral Complete, weighing 10 kg. In the initial assessment we found history of snoring and tonsillitis.



Fig 1. Pre op

Surgery was done in supine position with a Dingman mouth gag was applied to allow an adequate visibility. Palatoplasty was done using two flap push back technique. The surgical duration was 5 hours.



Fig 2. Post Op

Tongue edema was started to be seen in 7 hours post operatively but percutaneous oxygen saturation still in 98%.



Figure 3. Tongue edema after 7 hours post operatively.

The patient was observed carefully and a decreased of oxygen saturation to 91% and increase of respiration began to appear a half a hour later. O₂ nasal canul 2 lpm and dexamethasone injection was administered and the patient is placed in the head up position. About 2 hours later the tongue became too large to remain in the oral cavity and subsequently began to protrude out of the lips, and edema extended to the oral floor, causing neck swelling, pharyngeal stridor was heard



Figure 4. Edema spread to the oral floor and neck 9 hours post operation

Laboratory test and neck soft tissue X-ray was carried out. After 12 hours, edema and pharyngeal stridor persisted, then we consult to ENT department and they suggested to administering methylprednisolone, nebulized with flexotide, and plan to perform tracheostomy if difficulty of breathing got worse. The edema was gradually alleviated after 20 hours with disappearance of pharyngeal stridor. On the 3rd postoperative day, tongue edema was fully resolved.

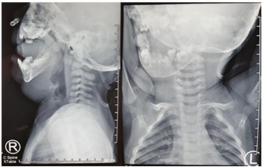


Figure 5. Neck Soft Tissue X-ray showing swelling of soft tissue at tongue and lower jaw region but air column still opening.



Figure 6. Post Operative Day 3 tongue edema was resolved and neck swelling was alleviated



Figure 7. POD V and 1 month after

DISCUSSION

Tongue edema after palatoplasty occurs immediately or within 2 hours after operation and there are some opinions that we had better be unhurried for extubation

Overpressure of Dingman's blade on the tongue can produce glossal hematoma, ischemic necrosis of tongue muscles, venous stasis or lymphedema.

Hyperextension of the head may also contribute to impaired arterial flow and decreased venous drainage of the tongue

In our case we believe that prolonged pressure of tongue by the Dingman mouth gag and hyperextension of the head posture during prolonged surgery were considered to be possible causes of the tongue and mouth edema.

The history of snoring and tonsillitis make the condition even worse. To prevent tongue edema the surgeon should be concern about the length of surgery, choosing an appropriate size of Dingman's blade in relation to the oral cavity to each patient; releasing the tongue blade for 5 min every 30 min and also avoiding hyperextension of the head, and administered periodic IV steroid injection as a prophylactic management for post-extubation. In our case we treated our patient with corticosteroid injection. Recent study suggest local steroid injection to the tongue base during cleft palate surgery may be beneficial.

Massive tongue edema contributes to airway compromise. Some literature suggest to attempt extubation only after resolving tongue edema. Other suggest inserting NPA before extubation and put tongue sutures. In this case, we nebulized our patient with corticosteroid as an anti inflammatory and to prevent airway compromise.

CONCLUSION

Tongue edema which happened several hours after palatoplasty is a rare case and potentially life-threatening. To prevent it, oral surgeon must pay attention to factors that may complicate post operative result and careful observation post operation is also important.

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