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Letter to the editor

# Submental and submandibular swelling should be checked before extubation in oral and neck surgery



## KEYWORDS

Extubation;  
Upper airway  
obstruction

Postoperative reintubation due to airway obstruction is a crucial issue for anesthesiologist. Several factors may cause airway obstruction after surgery.<sup>1</sup> Extubation should be very cautious if postoperative upper airway obstruction is likely to happen. We encountered a case of post-extubation airway obstruction, showing restlessness, dyspnea and desaturation, after submandibular abscess surgery at post-anesthesia care unit. After three times of failed oral tracheal intubation with Glidescope and Trachway, an emergent tracheostomy was performed to maintain patient's ventilation. Back to the moment of tracheal extubation, mild to moderate submandibular and submental swelling were noted. Progressive laryngeal or tracheal compression by the surrounding swelling tissue could be the most likely cause of the upper airway obstruction. In this case, we think that the Ludwig's angina developed post-operatively and tracheal extubation should be delayed.

Greenland et al.<sup>2</sup> studied three coronial cases with delayed airway compromise following extubation after surgical drainage of dental abscess and Ludwig's angina. Pay more attention to the early signs of airway obstruction and continual monitoring after extubation are recommended. Extubation criteria for oral and maxillofacial surgery patients have been discussed in Zulian's report.<sup>3</sup> However, whether the existence of submental or submandibular swelling or not was not included in the checklist for

extubation. According to the experience of our case, we suggest that submental and submandibular conditions should be routinely checked before tracheal extubation following oral and neck surgery.

Postoperative acute airway obstruction is a life-threatening situation. The anesthesia providers should be familiar with the early prodromal signs of airway obstruction such as sore throat, voice change, difficult cough, drooling, stridor and orthopnea.<sup>2</sup> Deploy early, don't be unable to handle it at the end. To ensure the success of tracheal extubation after oral and neck surgery, one another maneuver seems helpful—tracheal tube cuff leak test. Besides the standard cuff leak test, a simple technique (hearing air leak after deflation of the tracheal tube cuff) is easy to implement. If no air leak is heard, delayed extubation should be determined.

In conclusion, tracheal extubation after oral and neck surgery should be handled very carefully. In addition to the regular criteria, checking submental and submandibular swelling should be added in the checklist for tracheal extubation.

## Declaration of competing interest

The authors have no conflicts of interest relevant to this article.

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