Severe acute postoperative airway compromise secondary to submandibular sialadenitis

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A 68-yr-old woman developed left-sided submandibular swelling following right retrosigmoid craniotomy for excision of a vestibular schwannoma. The procedure was performed with the patient supine and her head rotated to the left and flexed while fixed with Mayfield pins. Two

hours after extubation, she developed firm left-sided submandibular swelling that progressed markedly over the next 12 hr, with extension from the tragus to the sternal notch. Computed tomography (Figure, *panel A*) revealed acalculous submandibular sialoadenitis (white arrow) with

Figure (A) Computed tomography of the neck shows acalculous submandibular sialoadenitis (white arrow) with marked inflammatory changes, edema extending to the epiglottis and aryepiglottic folds (red

arrow), and extensive airway narrowing. (B) Flexible nasopharyngoscopy reveals severe billowy edema of the epiglottis (black arrow) with no visualization of the glottic opening

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She developed stridor and respiratory distress, for which intravenous steroids and nebulized racemic epinephrine were administered. Flexible nasopharyngoscopy revealed severe, billowy edema of the epiglottis (black arrow) with no visualization of the glottic opening (Figure, *panel B*). Emergent surgical tracheostomy was undertaken, additional high-dose intravenous steroids were administered, and she was decannulated on the ninth postoperative day.

Acute submandibular sialadenitis with airway compromise is a rare postoperative complication following retrosigmoid craniotomy.¹ The presumed mechanism is salivary outflow obstruction in the setting of head rotation and flexion, exacerbated by endotracheal tube compression of sublingual papillae and submandibular ductal outflow.² The swelling often resolves within seven days. Corticosteroids may be used empirically given the high risk of airway compromise.³ Consideration should be given to prompt re-intubation in an operating room with the faculty available to perform an emergency tracheostomy if

needed. Despite its rarity, anesthesia providers must be aware of this potential complication, advocate for the prevention of extremes of head rotation and flexion, and remain vigilant for postoperative submandibular swelling and airway compromise.

Conflicts of interest None declared.

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