

# A Case of Right Parotid Mass with Difficult Airway Management and Surgical Challenges

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**Keywords:** Airway obstruction, Intubation, Neck neoplasm

Respected Sir/Madam,

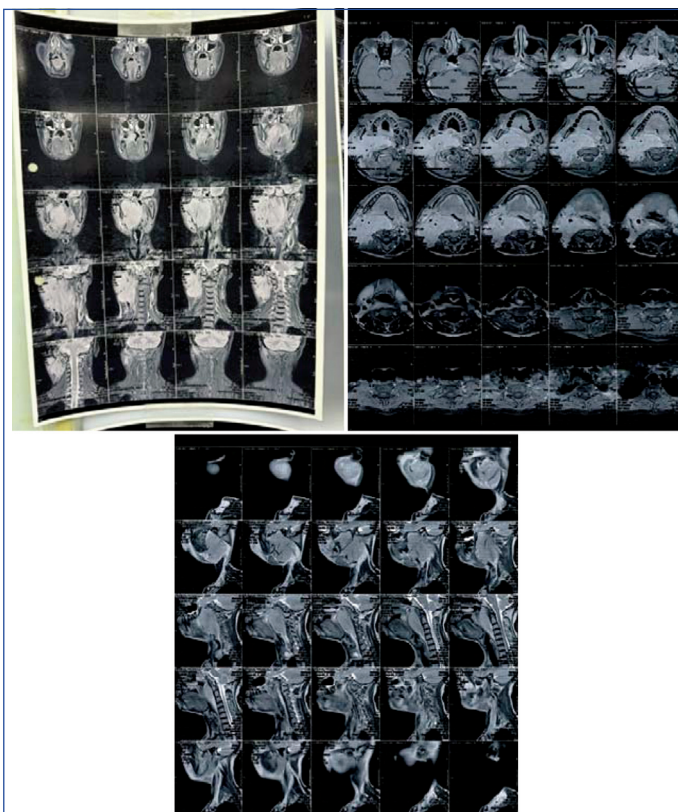
Parotid gland tumours extending into the parapharyngeal space pose unique anaesthetic and surgical challenges, especially when they compromise the airway [1]. We highlight the value of multidisciplinary planning and adaptable airway techniques during the perioperative phase by presenting a complex case of a right parotid tumour in a 46-year-old woman [Table/Fig-1].

The patient had a 6-month history of orthopnoea, dysphagia, muffled voice, and progressive swelling of the right neck. The symptoms did not change with position. Clinical examination revealed a firm mass in the right parotid region, along with a reduced oropharyngeal space and an intraoral bulge confirming it on MRI [Table/Fig-2]. A parotid mass measuring roughly 7×6.5 cm was discovered by a contrast-enhanced CT scan. It extended into the nasopharynx and oropharynx [Table/Fig-3], abutting the supraglottis and narrowing the airway [Table/Fig-4].

Bilateral vocal cords were visible, but pooling of secretions and a right parapharyngeal mass displacing airway structures were confirmed by ENT assessment using indirect and video laryngoscopy [2]. Nebulisations to control secretions and respiratory physical therapy were part of the preoperative optimisation. After being assigned an American Society of Anaesthesiologists (ASA) II classification, the patient was scheduled for a right parotidectomy while under general anaesthesia.

An awake nasal fiberoptic intubation was planned in anticipation of a challenging airway [3]. Nebulised 4% lignocaine, glycopyrrolate 0.2 mg IM, dexmedetomidine 0.25 µg/kg, and lidocaine-adrenaline nasal packing were all used in the preparation. Fiberoptic intubation failed despite proper topicalisation and sedation because of a soft-tissue bulge that blocked the glottis's view and made it difficult to navigate the scope past the mass. Neither active bleeding nor desaturation was present. The choice was made to use video laryngoscopy for oral intubation, which provided a Cormack-Lehane grade IIb view. A 7.0 mm flexometallic tube was successfully passed, navigating lateral to the mass.

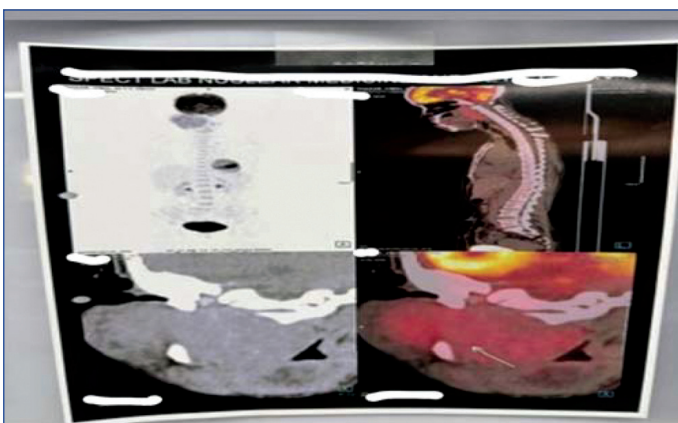
Propofol (2 mg/kg), fentanyl (2 µg/kg), and vecuronium (0.1 mg/kg) were used to induce anaesthesia, and sevoflurane and oxygen-air (50:50) were used to maintain it. The successful airway securing and expectation of a lengthy surgery served as the foundation for the use of vecuronium. The ophthalmology team had to perform tarsorrhaphy because the dissection of the deep lobe of the parotid caused damage to the facial nerve during surgery. The procedure took more



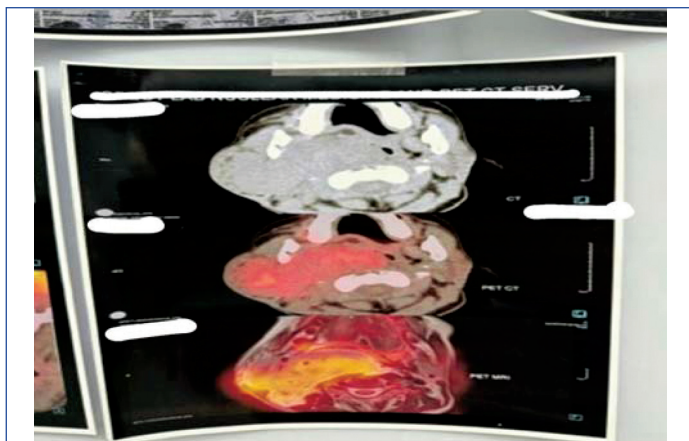
[Table/Fig-2]: MRI showing the size and extent.



[Table/Fig-1]: Right parotid mass.



[Table/Fig-3]: Contrast-enhanced CT scan showing a right parotid mass (approximately 7×6.5 cm) extending into the nasopharynx and oropharynx.



[Table/Fig-4]: Mass extension.

than five hours, and 1200 mL of blood were lost. The patient was intubated and moved to the intensive care unit due to the expected secretion load and airway oedema. To guarantee positioning and integrity, a second 7.0 mm endotracheal tube was substituted. Extubation attempts following surgery were unsuccessful because of bilateral basal crepitations, desaturation, and an abundance of secretions. A decision for elective tracheostomy under local anaesthesia was made on postoperative day 2, facilitating pulmonary toilet and gradual weaning. This case highlights the complexity of managing airway in parapharyngeal extension of parotid tumours. Though the tumour measured 7 cm, the CT confirmed extensive soft-tissue spread into pharyngeal spaces, causing mechanical obstruction. Awake fiberoptic intubation, while ideal, can fail due

to anatomical distortion. In such scenarios, readiness with Plan B, including video laryngoscopy, is essential. The use of a long-acting neuromuscular blocker like vecuronium was deliberate, post airway control, considering prolonged surgery [4].

In hindsight, greater consideration for a preemptive tracheostomy or standby surgical airway may have been warranted. The failure of extubation was multifactorial - residual oedema, secretions, and lower respiratory tract involvement. Comprehensive preoperative planning, timely imaging, and coordination across specialties were crucial for this patient's outcome.

We underscore the importance of tailored airway strategies in parotid tumours with pharyngeal involvement. This case adds to the limited literature on airway compromise from deep lobe parotid tumours and reinforces the need for flexible, multidisciplinary approaches in airway management [5].

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### AUTHOR DECLARATION:

- Financial or Other Competing Interests: None
- Was informed consent obtained from the subjects involved in the study? Yes
- For any images presented appropriate consent has been obtained from the subjects. Yes

### PLAGIARISM CHECKING METHODS: [Jain H et al.]

- Plagiarism X-checker: Apr 14, 2025
- Manual Googling: Apr 18, 2026
- iThenticate Software: Apr 20, 2026 (3%)

### ETYMOLOGY: Author Origin

EMENDATIONS: 7

Date of Submission: Apr 13, 2025  
Date of Peer Review: May 30, 2025  
Date of Acceptance: Apr 24, 2026  
Date of Publishing: Aug 01, 2026