

E Anaesthetic Airway Management of Parapharyngeal Mass

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Abstract: *Primary Parapharyngeal Space (PPS) tumors are rare, representing only 0.5% of all head and neck neoplasms. These patients present a challenge to the anesthesiologist as they block the pathway for ventilation as well as intubation. They often pose a therapeutic and diagnostic problem due to variable nonspecific symptoms and the complex anatomy of this space. Pleomorphic adenoma is the most common benign tumor in this space. Here, we report the case of a 28-year-old female presented with swelling over right side of the neck, hoarseness of voice, and difficulty in swallowing. The radiological and cytological evaluation was performed and the patient was diagnosed as having PPS Pleomorphic Adenoma. The tumor was excised via the transcervical approach.*

Keywords: Anesthetic management, difficult airway, fiber optic intubation, Para pharyngeal mass

1. Introduction

The Parapharyngeal space (PPS) is a potential space located lateral to the upper pharynx. This space extends from the skull base to the hyoid bone. The three main groups of primary tumors of this space are salivary gland tumors, neurogenic tumors, and paragangliomas. The most common group is the salivary gland tumor. Pleomorphic adenoma is the most common salivary gland tumor of PPS and due to their slow growth can remain undetected for a long time. Clinical symptoms usually start appearing when the tumor size reaches > 2.5-3.0 cm. Clinical manifestations include gradually increasing painless mass in the neck and/or in the oropharynx (causing dysphagia, hoarseness, obstructive sleep apnea and, rarely, difficulty breathing). With the advent of cross-sectional imaging studies incorporated along with guided fine needle aspiration cytology (FNAC), interpretation of the nature of these PPS lesions have proved to be helpful. Complete surgical excision is the mainstay of treatment for PPS pleomorphic adenoma, and various surgical approaches have been described.

2. Case Report

A 28-year-old female patient weighing 50 kgs presented with complaints of mass over right side of neck since 6 months; hoarseness of voice since 3 months difficulty in swallowing solids since 1 month was posted for excision of mass under GA.



Figure 1: Patient with right Parapharyngeal space mass

3. On Examination

Mouth opening adequate, Mallampati grading III, Mass visible on right side, Uvula shifted to left side.

4. Preoperative Lab Values

VLS – Bilateral vocal cord movement. Valleculla – Normal. Mass visible over right parapharyngeal space

RBS, CBC, RFT, LFT, Serum Electrolytes – within normal limits.

CT scan of the neck showed a large heterogeneously enhancing mass lesion in right parapharyngeal space.

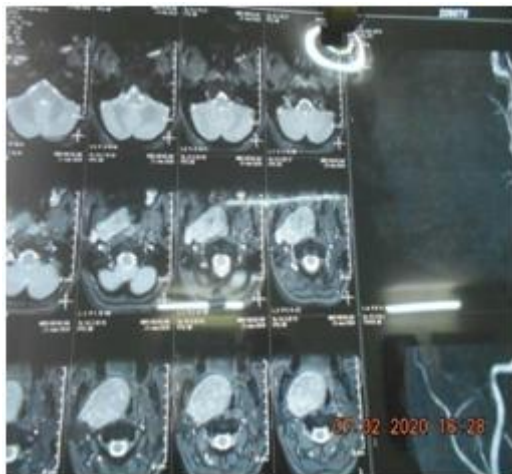


Figure 2: MRI images of mass



Figure 4: Intraop-after excision of tumor

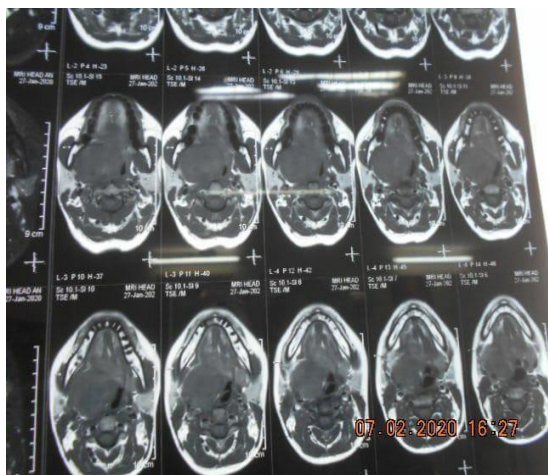


Figure 3: Coronal section showing parapharyngeal mass

5. Preoperative Preparation

Patient treated with injection Ceftriaxone 1 gm 24 hours prior to surgery. On the day of surgery, injection Pantoprazole 40 mg i.v., injection Ondansetron 4 mg i.v., injection Glycopyrrolate 0.2 mg i.v. and topical analgesia of both the nostrils with gauze soaked in 4% Lignocaine in 1:20,000 adrenaline is given. Each nostrils packed for 15 min alternatively half an hour prior to induction and intubation. Oral gargling with Betadine solution is given.

Bilateral superior laryngeal nerve block with 2 ml of 1% Lignocaine on each side, transtracheal 2ml of 4% Lignocaine given. Right nostril selected, 2% Lignocaine jelly smeared onto a 6.5 ET tube.

The fibre-optic scope was inserted nasally, the path was easily visualized till the carina, then a 6.5 ET tube was inserted. After confirming intubation, the patient was paralyzed and sedated.

The patient was sedated with Propofol 60 mg + Midazolam 1mg + Fentanyl 50 micrograms and maintained under O₂ + N₂O + Sevoflurane + Vecuronium. The surgery lasted for 1 hour. The patient was extubated uneventfully at the end of the procedure.

The mass was excised by external approach and sent for biopsy and the biopsy report was pleomorphic adenoma.

6. Discussion

Parapharyngeal space tumor are rare, among them 80% tumor are benign and 20% malignant. Pleomorphic adenoma is the most common benign tumor of this space. It presents as an asymptomatic mass causing mild bulging in the soft palate (or) tonsillar region (or) fullness in the neck. Sometimes they present with dysphagia, dyspnea and hoarseness of voice. As the mass enlarge, they may present with horner's syndrome or with symptoms of obstructive sleep apnea.

Airway management in the case of parapharyngeal mass is a challenge. We anticipated difficult airway in this case as the visible pharyngeal mass obscuring the airway during airway assessment. Sedation and anesthesia can cause a loss in muscle tone leading to collapse of the airway. So, sedatives are avoided preoperatively. We can opt for blind nasal intubation, but in case of facing any difficulty, it may cause traumatic bleeding and lead to soiling of the airway. So, blind nasal intubation avoided. We can go for inalational induction also, but it may also cause collapse of the airway after induction. Awake fibreoptic intubation is the gold standard in the management of difficult airway. So, we tried awake fibreoptic bronchoscopy and successfully intubated the patient without facing any difficulty. Careful preoperative evaluation of patient, anticipating difficult intubation, planned fibreoptic intubation with back up of ENT surgeon for emergency tracheostomy avoids disastrous consequences due to loss of control over airway.

Although various surgical approaches have been described in literature, the transcervical and transparotid approach are most frequently used. Here, we safely removed the tumor in to by using a standard transcervical approach without any

complication.

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