

Case Report

Usual pathology at an unusual site - pleomorphic adenoma of parapharyngeal space: a rare case report

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ABSTRACT

The parapharyngeal space is an inverted triangular pyramid. Parapharyngeal space masses account for 0.5% of all head and neck tumours and the majority is benign. Minor salivary gland tumour is a rare entity. A 75 years old female presented with a mass left side soft palate, per operatively mass of size about 6×3 cm was deeply extending to left parapharyngeal space and excised through transoral approach which came out to be pleomorphic adenoma of minor salivary gland on histopathological examination. Although external approach should be preferred due to important structure in vicinity but transoral approach can be used in selective cases.

Keywords: Pleomorphic adenoma, Minor salivary gland, Parapharyngeal space

INTRODUCTION

The parapharyngeal space (PPS) is an inverted triangular pyramid extending from the base of the skull to the hyoid bone. The PPS is divided into 2 compartments by styloid process and its attached muscles and fascia. The anterior or prestyloid compartment is occupied by the deep lobe of the parotid gland, fat and lymphatic nodes, the internal maxillary artery and cranial nerve V branch to tensor veli palatini muscle. In the posterior or poststyloid compartment lies the neurovascular axis, consisting of the carotid artery, jugular vein, cervical sympathetic chain and the cranial nerves IX, X, XI and XII.¹

PPS masses account for 0.5% of all head and neck tumours and the majority is benign (76%).² Neoplasms of salivary gland origin are located in the prestyloid PPS. Minor salivary gland tumours constitute 22% of all the salivary gland tumours and among them only 18% of them are benign, the rest being malignant. Among the

benign salivary gland tumours seen in the PPS the most common prestyloid lesion is pleomorphic adenoma.³

Most common site of minor salivary gland pleomorphic adenoma is the palate followed by lip, buccal mucosa, floor of mouth, tongue, tonsil, pharynx, retromolar area, and nasal cavity⁴ and rarely in the PPS. The PPS is of particular importance, both for the variety of structures enclosed within it, and for the varied nature of the tumours found there. In this paper one case of PPS pleomorphic adenoma of minor salivary gland and its treatment is reported.

CASE REPORT

A 75 year old female presented with complaint of mild discomfort during swallowing on and off for last six months. On oral cavity examination of the patient, there was a bulge present involving the left side soft palate, left lateral pharyngeal wall, which was firm and non tender

on digital palpation. No involvement of any cranial nerves was found on clinical examination. With a provisional clinical diagnosis of PPS tumour CT scan was done. CT scan showed homogeneously enhancing tumour mass of size approximately 5×5 cm in the left PPS. Fine needle aspiration cytology of the mass done twice was non diagnostic. After investigating the patient, she was taken up for surgery. The tumour was approached through transoral approach by splitting the soft palate. The tumour was enucleated and pharyngeal wall and palate were sutured back without any intra operative complication. The tumour mass of size about 6×3 cm excised which was deeply extending to left PPS (Figure 1).



Figure 1: Tumour mass of size about 6×3 cm.

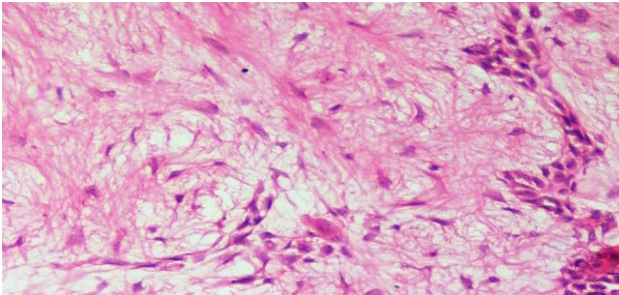


Figure 2: Histopathological examination showing mixed epithelial and mesenchymal components arranged in nest, cord, sheets and occasional glands with luminal and myoepithelial layers (hematoxylin and eosin, 40X).



Figure 3: Postoperative healing during follow up.

Histopathological examination, revealed mixed epithelial and mesenchymal components arranged in nest, cord, sheets and occasional glands with luminal and myoepithelial layers. The final histopathology report confirmed the diagnosis as pleomorphic adenoma minor salivary gland (Figure 2). The patient's postoperative course was uneventful. The healing was satisfactory (Figure 3).

DISCUSSION

Pleomorphic adenomas are found rarely in the PPS and thus both diagnosis and surgical management are difficult. Most of these tumors remain silent for a long time since they grow slowly, and do not show symptoms even if tumors are in contact, or displace, vital structures located in the PPS.⁵

Most of the benign tumours of the minor salivary gland in the oral cavity usually present as submucosal painless swelling, but which arise from the PPS may show additional signs and symptoms, like earache, neuralgia, XI, X or XI cranial nerves palsies, trismus etc.⁶ Benign parapharyngeal mass classically present as submucosal swelling in the lateral pharyngeal wall with or without extension to retromandibular fossa.^{2,7,8}

CT scan is the diagnostic tool for the tumours of PPS because it determine the extent of disease, type of tumour and its local spread. There is contrast enhancement in vascular and neurogenic tumours. Presence of intact fat plane helps in distinguishing benign tumours from malignant. PPS tumour and extension of tumours from the deep lobe of a parotid gland is distinguishable by a fine lucent line which represent the fibroadipose tissue layer in between.⁹

The treatment of pleomorphic adenoma is essentially surgical. Being well encapsulated, tumour resection with adequate margins of normal surrounding tissue is necessary to prevent local recurrence of pleomorphic adenoma.⁹

The treatment of these tumours is crucial because of the difficult tumour location and presence of important structures in vicinity such as large vessels of the neck, sympathetic chain, lymph nodes, and lower cranial nerves. Damage to these structures during resection can lead to undesired consequences.

There are multiple surgical approaches for PPSs i.e. transoral, transmandibular, transparotid, infratemporal, submaxillary and transcervical.¹⁰ Complete surgical excision is the treatment of choice. Although external approach should be preferred due to important structure in vicinity but transoral approach can be used in selective cases.

CONCLUSION

Pleomorphic adenoma in PPS is of rare occurrence and it must be kept in the differential diagnosis of PPS swelling. Complete surgical excision is the treatment of choice. Care should be taken when attempting surgical removal of the mass because capsule breach is associated with increased recurrence rates.

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