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CASE REPORT

A Giant Pleomorphic Adenoma of the Palatine Arch in a 75-Year-Old Man: A Case Report with Review of Literature

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ABSTRACT

Pleomorphic adenoma (PA) is the most common benign tumor of the salivary glands and has both epithelial and mesenchymal tissues. It most commonly arises from the parotid or submandibular glands. Rarely, it arises from the minor salivary glands. We report here a case of pleomorphic adenoma arising from the soft palate and both sides of anterior tonsillar pillars in a 75-year-old man. This patient was presenting painless slow growing large swelling in the soft palate over 20 years causing mechanical obstruction of airway and food. The entire tumor mass was excised along with overlying mucosa.

Keywords: Pleomorphic adenoma, Soft palate, Anterior pillar, Minor salivary glands.

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INTRODUCTION

Pleomorphic adenoma (PA) is the commonest benign salivary gland tumor. It mainly occurs in the parotid gland and submandibular gland. If the tumor occurs in the minor salivary glands, the most common site is the palate, but this tumor can also occur in other sites include the upper lip, cheek, floor of the mouth, larynx and trachea.[1] However, majority of minor salivary gland tumors are of the malignant variety. PA contains both epithelial and mesenchymal origin.[2] Generally, it is mobile, except when it occurs in the hard palate. Intraoral mixed tumors, especially those noted within the palate, lack a well-defined capsule. Lesions of the palate frequently involve periosteum or bone. Approximately, 25% of benign mixed tumors undergo malignant transformation.[3] Treatment for the pleomorphic adenoma is radical surgery. Inadequate resection leads to local recurrence.[4] A case of a large PA of the minor salivary glands arising in the soft palate and both sides anterior pillars of the tonsils is described. It can be misdiagnosed as malignant tumor on blind clinical diagnosis in this advanced aged patient. This case report emphasizes on the need for awareness of its diverse presentation by the examining clinician that could influence the outcome greatly and for histopathological diagnosis of such growth before any definitive treatment.

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CASE REPORT

A 75-year-old male presented with a painless slow growing large swelling (Fig. 1) over the soft palate for 20 years duration. The mass was causing mechanical obstruction of airway, food passage and causing speech problem. There was no preceding history of trauma and history was unremarkable. The patient's general condition was healthy. On examination, there was a 10 × 7.5 cm sized, firm, nontender, circumsized lesion, faintly lobulated with smooth surface over the soft palate, uvula and bilateral anterior pillars of the tonsil. There was no regional lymphadenopathy, and his general and systemic examinations were normal. Computed tomography (CT) scan of palate did not show bony lesion (Figs 2 and 3). A punch biopsy was taken which confirmed the pleomorphic adenoma (Fig. 4). The entire tumor was excised *in toto* with overlying mucosa under general anesthesia with nasoendotracheal intubation. There has been no recurrence at 6 months of follow-up.

DISCUSSION

Pleomorphic adenoma also known as benign mixed tumor is the most common tumor of salivary glands. It rarely involves minor salivary glands.[5] The term pleomorphic describes the embryogenic basis of origin of these tumors, which contains both epithelial and mesenchymal tissues.[6]

Pleomorphic adenoma of minor salivary gland is most commonly seen in palate (10%), followed by lip (4%).[7]

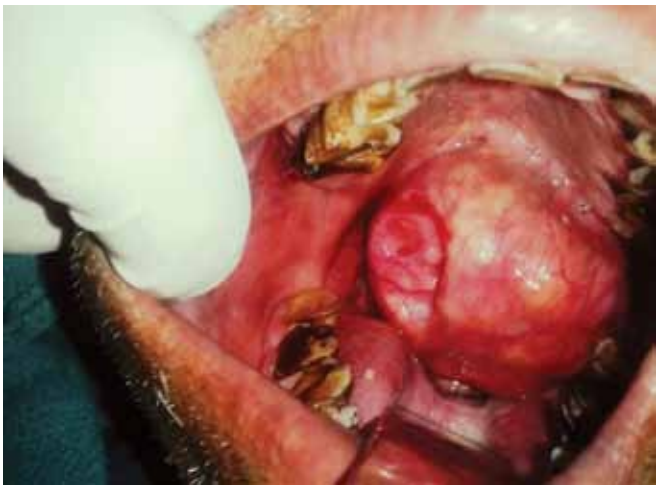

Fig. 1: Mass arising from palatine arch

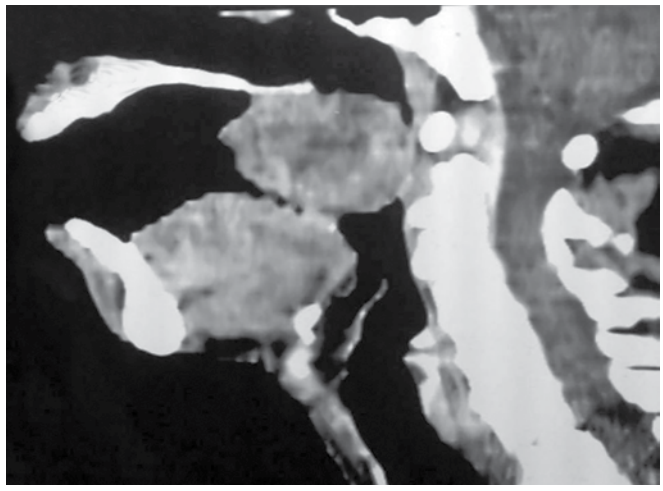

Fig. 2: Computed tomography scan of neck with sagittal view showing mass

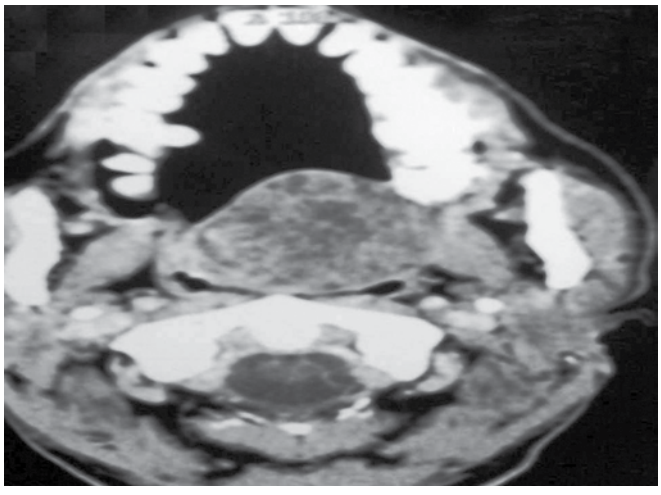

Fig. 3: CT scan of neck with coronal section showing mass

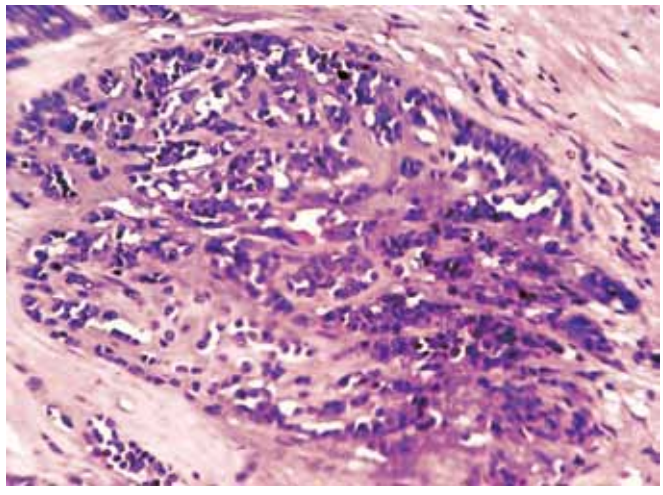

Fig. 4: HPE showing PA of minor salivary gland

The uncommon sites are paranasal sinuses, larynx and trachea. PAs have also been reported in tongue,[8] soft palate,[9] uvula[10] and even external auditory canal.[11] Though, this tumor is not a rare one, these kinds of presentations are most often rare and are often misdiagnosed as malignant. Clinically, the patient presented a solitary, painless, slow growing, well-circumscribed palatal lump which is typical presentation of such tumor. The mechanical symptoms most commonly manifested by tumors of this location are dyspnea, dysphagia, acute airway obstruction and obstructive sleep apnea.[12] In our case, the presenting complaints were dysphagia and difficulty in speech. Tumors arising in the minor salivary glands account for up to 22% of all salivary gland neoplasm.[13,14] Majority are malignant without only 18% being benign. The commonest site of occurrence of PA of minor salivary glands is the palate followed by lip, buccal mucosa, floor of the mouth, tongue, tonsil, pharynx, retromolar area and nasal cavity.[13,15]

The important diagnostic tools are FNA biopsy and imaging. Cytological finding in PA are typically of mixed epithelial cells and mesenchymal elements. These features were clearly illustrated in our case. The histopathological confirmation is mandatory in operating these tumors. However, differentiation from adenoid cystic carcinoma and polymorphous low grade adenocarcinoma may be difficult with FNA alone.[16] Imaging with ultrasound, MRI, or CT may be used depending on the site and size of tumor.[17] In our case, CT with contrast was primarily used to determine size and more importantly infiltration of lesion into the surrounding tissue. We found the lesion to be a 10 × 7.5 cm soft-tissue dense mass, not involving adjacent tissues. CT scan with contrast enhancement is an important diagnostic tool. Presence of intact fat plane helps in distinguishing benign tumors from malignant.

Histopathologically, PA is an epithelial tumor of complex morphology, possessing epithelial and myoepithelial elements arranged in a variety of patterns and embedded in a mucopolysaccharide stroma. Formation of capsule is as a result of fibrosis of surrounding salivary parenchyma, which is compressed by tumor and is referred to as false capsule.[18]

The treatment of PA is essentially surgery. Though these benign tumors are apparently well encapsulated,

resection of the tumor with an adequate margin of grossly normal surrounding tissue is necessary to prevent local recurrence as these tumors are known to have microscopic pseudopods like extension into the surrounding tissue due to 'dehiscences' in the false capsule.[18] Spiro reported a recurrence in 7% of 1,342 patients with benign parotid neoplasms and 6% of patients with benign minor salivary gland tumors.[1] It has been reported that rupture of the capsule on a benign PA frequently occurs during encluation or incomplete excision. Along the ruptured site, the myxoid material in the tumor spreads to the surrounding damaged soft tissue and distant sites through a venous or lymphatic route.[19,20] Postoperative radiotherapy could possibly reduce the recurrence rate in such tumors.[21] Adequate clearance of the tumor with a cuff of surrounding dispensable normal tissue is the key to successful treatment of such tumors. These tumors usually do not recur after adequate surgical excision. Most recurrence can be attributable to inadequate surgical techniques, such as simple enucleation leaving behind microscopic pseudopods like extensions.[22]

CONCLUSION

The majority of minor salivary gland tumors are malignant. Among benign tumors of the minor salivary glands, PA is the commonest, found most often in the oral cavity. The palatine arch is a very rare site for this tumor. This is also very rare occurrence in advanced age. Complete surgical excision is the treatment of choice.

Pleomorphic adenoma, though a common entity, is still a challenging tumor for pathologist, radiologist and the surgeon. Its diverse histological and topographical property makes the tumor special. The examining clinician and treating surgeon must be aware of its recurrence, longevity, and malignant potential if incorrectly diagnosed or treated.

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