

## PLEOMORPHIC ADENOMA OF PAROTID GLAND ON FNAC- A CASE REPORT

Vaibhav Pandurang Mane<sup>1</sup>, Vishrabdha Rahul Pawar<sup>2</sup>, D. G. Mote<sup>3</sup>

<sup>1</sup>Associate Professor, Department of Pathology, Bharati Vidyapeeth Deemed University Medical College and Hospital, Sangli.

<sup>2</sup>Professor, Department of Pathology, Bharati Vidyapeeth Deemed University Medical College and Hospital, Sangli.

<sup>3</sup>Professor, Department of Surgery, Bharati Vidyapeeth Deemed University Medical College and Hospital, Sangli.

### ABSTRACT

#### BACKGROUND

Salivary gland neoplasms are less common. Benign neoplasms are most common. Parotid gland is affected more frequently as compared to other salivary glands. In salivary gland, pleomorphic adenoma is the most common benign neoplasm and mostly seen in parotid gland.<sup>(1,2,3)</sup> The "pleomorphic" nature of the tumour can be explained on the basis of its epithelial and myoepithelial elements with mucoid, myxoid or chondroid tissue in a mucopolysaccharide stroma.<sup>(1,4,5)</sup> The tumour has a female predilection between 30 and 50 years of age.<sup>(1,3,4)</sup> Slowly progressing asymptomatic swelling is the usual presentation of the tumour. Surgical excision of the tumour mass forms the mainstay of treatment with utmost care taken to preserve the facial nerve.<sup>(6,7)</sup> Fine-Needle Aspiration Cytology (FNAC) of the salivary gland is a sensitive and specific technique used in the diagnosis of lesions of the salivary gland.<sup>(8,9)</sup> On FNAC, adequately cellular aspirates make distinction easy in most cases. However, sparse cellularity makes diagnosis difficult partly due to lack of observer familiarity with the different patterns.<sup>(8,9,10)</sup> The diagnosis of Pleomorphic Adenoma (PA) can be made accurately, but this common salivary gland neoplasm can be diagnostically challenging causing pitfalls in cytodiagnosis.

#### KEYWORDS

Pleomorphic, Salivary Gland, FNAC, Adenoma.

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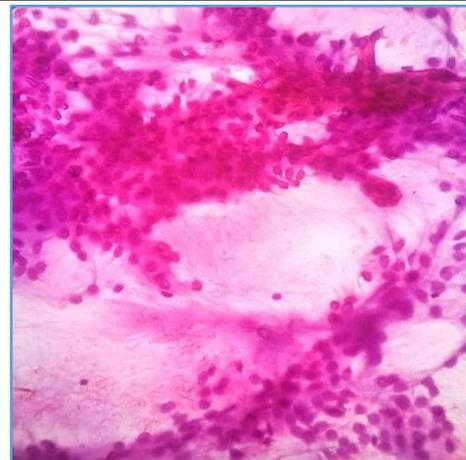
#### CASE REPORT

A 46 years old female patient reported to the Outpatient Department with a chief complaint of painless mass, left preauricular area. On systemic examination, nothing was significant. A well-defined, ovoid, multilobular, firm, nontender swelling, 5 × 4 cm in diameter was seen on the preauricular area on left side. A provisional diagnosis of benign tumour of the left parotid gland was taken into consideration.

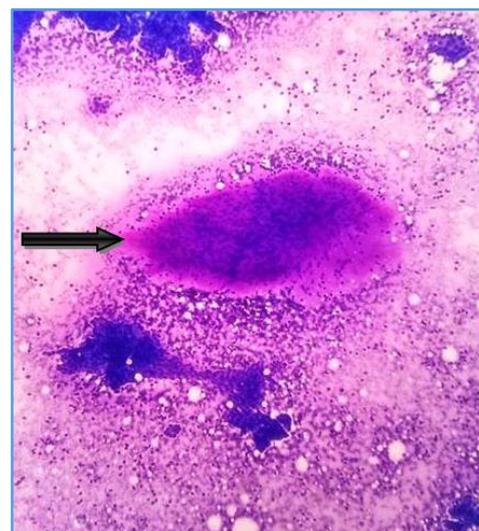
A Fine Needle Aspiration (FNA) was done. A diagnosis of pleomorphic adenoma was given. The patient was lost to followup and hence details regarding the histopathological status of his preauricular swelling were not known.



**Figure 1. Pleomorphic Adenoma Cytology: Epithelial, Myoepithelial Cells with Fibromyxoid Stroma (H & E, 10X)**



**Figure 2. Pleomorphic Adenoma Cytology: Epithelial, Myoepithelial Cells with Fibromyxoid Stroma (H & E, 40X)**



**Figure 3. Fibromyxoid Stroma (Giemsa stain 10 X)**

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Corresponding Author:

Dr. Vaibhav Pandurang Mane,

Flat No. 1, Shri Ram Shailya Apt.,

Neminathnagar, Sangli-416415.

E-mail: vaishnavilab1060@gmail.com



**DISCUSSION**

PA is a well-defined benign salivary gland tumour, characterised by its pleomorphic or mixed appearance characterised by presence of epithelial, myoepithelial, fibromyxoid or fibrochondroid components in various combination.<sup>(1,2)</sup> PA usually presents with preauricular mass with no symptoms.<sup>(3,4,5)</sup>

The majority of these tumours measure 2 - 6 cm in size when excised.<sup>(6)</sup> However, large tumour may be seen as a single, irregular nodular mass stretching the overlying skin or mucosa. Facial nerve weakness is an infrequent sign in parotid tumours, although large neglected tumours may present with facial nerve weakness.<sup>(7,8)</sup> Oral retrotonsillar mass/parapharyngeal space tumour may be a presenting sign in cases of deep lobe involvement.<sup>(9)</sup>

Our patient was a 46 years old female who presented with a slowly enlarging, multilobular, asymptomatic swelling on the left side of the face since 4 years.

Imaging modalities such as Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) are essential aids in diagnosis. MRI is favoured on the basis of better soft tissue delineation, detailed tumour margin description and the tumour relationship with the surrounding structure.<sup>(8,9,10)</sup>

Ultrasound imaging helps to differentiate cystic lesions from solid parotid masses, and is also used for assessment of intracapsular versus extracapsular tumours. PA's have been identified by ultrasound based on their distinct margins and polycyclic shape.<sup>(5)</sup>

On FNAC epithelial, myoepithelial and fibromyxoid components are seen.

As pleomorphic adenoma exhibits a varied histopathologic presentation, it may be confused histopathologically with myoepithelioma, adenoid cystic carcinoma, mucoepidermoid carcinoma and basal cell adenoma.<sup>(4,6)</sup>

Risk factors for malignant transformation: Submandibular location, older age, larger size, prominent hyalinisation, increased mitotic rate (If present, sample tumour more thoroughly), and radiation exposure.<sup>(1,2)</sup>

Treatment of PA will vary depending upon involvement of facial nerve.

Enucleation, enucleoresection and superficial or total parotidectomy with preservation of the facial nerve formed the mainstay of surgical treatment.<sup>(5,6)</sup>

**CONCLUSION**

FNAC is a good pre-operative procedure for the diagnosis of Pleomorphic adenoma. One should be aware of the cytological variations to avoid diagnostic errors. When cytological features are not conclusive, one should opt for biopsy report.

**REFERENCES**

- [1] Califano J, Eisele DW. Benign salivary gland neoplasms. *Otolaryngol Clin North Am* 1999;32:861-73.
- [2] Luna MA. Salivary glands. In: Pilch BZ. edr. *Head and neck surgical pathology*. Philadelphia: Lippincott Williams & Wilkins 2001:284-349.
- [3] Carr RJ, Bowerman JE. A review of tumors of the deep lobe of the parotid salivary gland. *Br J Oral Maxillofac Surg* 1986;24(3):155-68.
- [4] Martinelli M, Martini F, Rinaldi E, et al. Simian virus 40 sequences and expression of the viral large T antigen oncoprotein in human pleomorphic adenomas of parotid glands. *Am J Pathol* 2002;161(4):1127-33.
- [5] Dalati T, Hussein MR. Juvenile pleomorphic adenoma of the cheek: a case report and review of literature. *Diagnostic Pathology* 2009;4(32):1-5.
- [6] Beunting JE, Smith TL, Holmes DK. Giant pleomorphic adenoma of the parotid gland: case report and review of the literature. *Ear Nose Throat J* 1998;77(8):634, 637-38, 640.
- [7] Ellis GL, Auclair PL. *Tumors of the salivary glands (Atlas of Tumor Pathology) 3rd series. Fascicle 17*. Washington, DC: Armed Forces of Institute of Pathology 1996.
- [8] Guerriere CN, Goff JJ, Cummings GH, et al. An unusually large, solid tumor of the parotid gland. *Ann Plast Surg* 1999;43(5):529-32.
- [9] Contucci AM, Corina L, Sergi B, et al. Correlation between fine needle aspiration biopsy and histologic findings in parotid masses. Personal experience. *Acta Otorhinolaryngol Ital* 2003;23(4):314-8.
- [10] Sergi B, Contucci AM, Corina L, et al. Value of fine needle aspiration cytology of parotid gland masses. *Laryngoscope* 2004;114(4):789.