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# PAROTID ONCOCYTOMA: DIAGNOSTIC VS SURGICAL DILEMMA

**ABSTRACT:**

Oncocytomas are rare benign tumors of salivary gland origin, most often seen involving the parotid gland. They should be considered as a possible diagnosis in elderly patients with slow growing, non-tender and mobile parotid swelling. We report here a middle aged female with left parotid swelling that was misdiagnosed on fine needle aspiration cytology and confirmed with histopathology report. Rarity of the disease with frequent cytologic overlaps and interpreter's inexperience account for the majority of aspiration cytology pitfalls. Therefore, aspiration cytology alone may be misleading at times, leading to surgical over-correction and further potential complications. The ever-changing trends of mucoepidermoid carcinoma (pre-operative, fine needle aspiration cytology), pleomorphic adenoma (intraoperative) and oncocytoma (post-operative, histopathology) have created diagnostic dilemma, confusion and challenged the surgical rationale. In cases with discrepancy between clinical, cytological and pathological reports, diagnostic as well as surgical dilemma exists wherein a thorough diagnostic re-assessment and a proper surgical revision is warranted.

**Keywords:** Fine needle aspiration cytology, Histopathologic examination, Mucoepidermoid carcinoma, Oncocytoma, Parotid gland

**INTRODUCTION:**

Salivary gland neoplasms represent the most complex and diverse group of tumors with relative infrequency (1% of Head and Neck tumors).<sup>1</sup> Oncocytomas are rare tumors (1%) of benign epithelial origin involving the parotid glands. It commonly occurs between the sixth and eighth decades of life with a slightly higher incidence in women.<sup>2</sup> They often present as solitary slow growing painless masses, which are firm, multi-lobulated and mobile upon clinical examination. Fine needle aspiration cytology (FNAC) is helpful in arriving at a provisional diagnosis and formulating the surgical plan however, may be misleading at times. Oncocytomas are often misdiagnosed and wrongly reported on FNAC as either pleomorphic adenomas, hemangiomas or other forms of oncocytosis.<sup>1</sup> We hereby present an interesting but confusing case of 48 year female with left parotid oncocytoma.

**CASE-REPORT:**

A 48 years female presented to our ENT out-patient department (OPD) with swelling on the left parotid region for 18 months. On examination, the swelling was non-tender, mobile and free from overlying skin. Contrast enhanced computed tomography (CECT) of the neck revealed a 2.4 x 2.1 cm well defined encapsulated heterogeneous enhancing mass with solid to cystic areas seen in the superficial lobe of left parotid gland without detectable cervical lymphadenopathy (Fig 1).

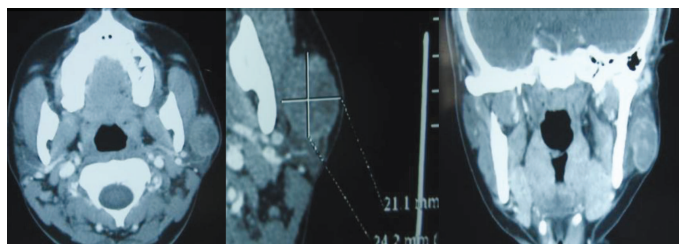


Fig 1. Showing CECT of the neck : axial and coronal view

FNAC showed histocytes with foamy cytoplasm and myxoid, mucoid material in absence of cellular atypia suggestive of low-grade Mucoepidermoid Carcinoma. Based on FNAC, she underwent left total conservative parotidectomy (Fig. 2).

However, the intra-operative clinical findings resembled Pleomorphic adenoma like picture with a 3x2 cm brownish, soft, well encapsulated



Fig 2. Showing intraoperative left facial nerve branches

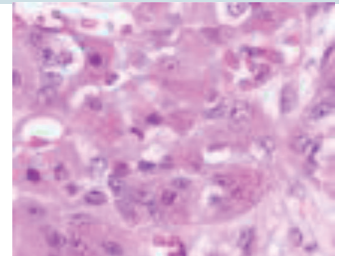


Fig 3. HPE showing oncocytes

mass found in the superficial lobe. But , the histopathology (HPE) report was consistent with Oncocytoma, showing a large polygonal, well defined, deeply eosinophilic, granular cytoplasm with small round nuclei having scanty stroma (Fig. 3). There were no complications in the post-operative period (Fig. 4a & 4b). There has been no recurrence (clinical and radiological) within 21 months follow-up.



Fig 4a: Showing post operative wound scar



Fig 4b: Showing preserved Facial Nerve

**DISCUSSION:**

Majority (80%) of the parotid oncocytomas are predominantly seen in females over the middle age while we report here a middle aged (48 yr) female with a benign parotid tumor.<sup>1, 2</sup> FNAC is increasingly being employed in the diagnostic work, moreover these aspirates can

prove challenging and misleading at times due to frequent overlaps between various lesions.<sup>3</sup> Diagnosis is further assisted by CT and/or magnetic resonance imaging (MRI) of the neck however, HPE confirmation is necessary.<sup>4</sup> Histopathologically, oncocytomas are described as a well circumscribed mass, composed of layers of oncocytes (small round nucleus, micro-granular, eosinophilic cytoplasm).<sup>4</sup> Knowledge of these salivary gland cytologic overlaps and pitfalls as well as clinical and radiological clues, may help clinicians arrive at the appropriate diagnosis and reduce false interpretations.<sup>5</sup> Surgical management with superficial parotidectomy is the cornerstone of therapy.<sup>3</sup> She underwent left total conservative parotidectomy in view of the FNAC report which looked as an illogical over-correction when retrospective analysis was done taking HPE report in mind. In such cases with diagnostic and surgical dilemma, created out by the discrepancies between FNAC and HPE report, proper diagnostic re-assessment and surgical revision should be carried out. Recurrences (20%) are mainly because of incomplete resection which obviously was not a problem in our case.<sup>4</sup>

#### CONCLUSION:

Oncocytic neoplasms should be considered as a possible diagnosis in older patients with slow growing non-tender parotid mass. The changing trends in diagnosis of the parotid mass from a benign adenoma to mucoepidermoid carcinoma and finally again to a benign oncocytoma based on the clinical, cytological and histological report respectively, created a state of diagnostic as well as surgical dilemma. In cases with disparity between clinical, cytological and histological reports, diagnostic and surgical rationale should be re-assessed and carefully re-planned.

#### COMPLIANCE WITH ETHICAL STANDARDS

There are no potential conflicts of interest among the authors. The case report was solely done on personal basis. The written informed consent from the patient was taken prior to sending for journal publications as per the Institutional Review Committee-Chitwan Medical College (IRC-CMC, 2012) guidelines.

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