



Duct Pseudopodia: A New Finding in Parotid Pleomorphic Adenoma

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Abstract

Pleomorphic Adenoma (PA) can be defined as a benign mixed tumor composed of epithelial and myoepithelial cells arranged with wide cytomorphologic and architectural diversity and morphological patterns, demarcated from surrounding tissues by fibrous capsule. Parotid gland is most commonly affected. The tumor is surrounded by pseudo capsule which is often dehiscent and there are fingerlike projections known as pseudopodia into the surrounding parotid tissue. This is why simple enucleation of the tumor led to a higher rate of recurrence. Occurrence of pseudopodia; microscopic finger like formations of tumor tissue that extend beyond the main lump of the tumor is a significant risk factor for local recurrence. Pseudopodia extending to lumen of parotid duct have been found in this case, increasing the risk of recurrence in such cases. The rate of tumor recurrence after surgery for benign salivary gland pleomorphic adenoma varies considerably in different clinical settings and seems to depend to a great extent on the surgical technique used. The importance of tumor spillage for subsequent recurrence has recently been questioned.

Introduction

Pleomorphic adenoma is the most common salivary gland tumor. Pleomorphic adenoma is seen more often in females than in males (2:1 ratio) [1]. Microscopically, PAs are characterized by a myriad of morphological diversity. Epithelial cells are arranged in sheets and islands showing typical ductal structures, and various epithelial and myoepithelial characteristics as spindle, clear, squamous, basaloid, plasmacytoid, oncocytic and sebaceous. The stroma characteristically is mixed, with fibrous, chondroid, myxoid or hyaline aspects [2]. The identification of epithelial, mesenchymal and stromal component, which may vary quantitatively from one tumor to another, is essential to the recognition of pleomorphic adenoma.

Among the major salivary glands, the tail of the superficial lobe of the parotid salivary gland is the most common site of occurrence for pleomorphic adenoma (70% to 80% of cases), although this lesion can occur in any parotid location [3].

Pleomorphic adenoma usually presents as a slow-growing, painless mass, which may be present for many years. Facial nerve involvement though classically seen in malignant tumor, has been reported in pleomorphic adenoma also.

Peculiar features of microscopic satellite tumor nodules, pseudopodia, and capsular penetration beyond the capsule may be the cause of recurrence of pleomorphic adenomas in cases that were treated with simple enucleation or in cases in which surgical resection was performed with inadequate surgical margins [4-6].

Case Presentation

We encountered a case of pleomorphic adenoma in a 58 yrs male patient with a history of left parotid swelling for 6 yr (Figure 1), gradually progressive with no history of facial asymmetry or pain and prior history of parotid biopsy. Pre op cytopathology confirmed it to be pleomorphic adenoma. CEMRI revealed multilobulated, multicystic mass involving left superficial lobe (Figure 2) Pt was planned for superficial parotidectomy.

Intraoperatively tumor pseudopodia were found to traverse through the parotid duct lumen, without invading the wall of duct (Figure 3).

Tumor was encasing the lower branches of facial nerve, though nerve was not involved as confirmed in post op histopathology. Lower trunk was sacrificed to achieve adequate margin. Surgical specimen was roughly 7 × 6 cm (Figure 4). We couldn't find any literature on pseudopodia

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Figure 1: Clinical picture.



Figure 4: Surgical specimen.

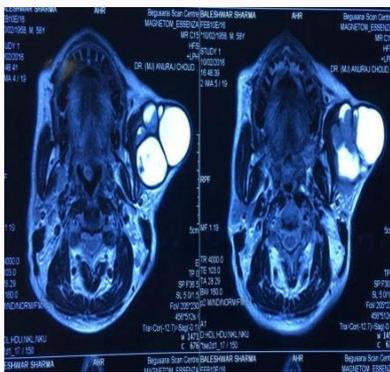


Figure 2: CEMRI axial cuts.



Figure 3: Duct pseudopodia.

traversing through the duct, making it a rare finding, also increasing the risk of recurrence.

Post operative histopathology report confirmed it as cellular pleomorphic adenoma.

Discussion

Pleomorphic adenoma a commonly encountered benign tumor in ENT clinical practice is managed surgically by superficial or total conservative parotidectomy.

Recurrence has been related to many factors, including an incomplete capsule, extension of tumor nodules beyond the capsule, small protrusions, pseudopodia that extend beyond the central tumor mass and intraoperative tumor rupture in which tumor contents spill into the operative field [7]. In 1998, Henriksson et al., [8] showed an increased incidence of pseudopodia in primary pleomorphic adenomas that subsequently recurred.

Extension of pseudopodia into the parotid duct as reported in this case increases the risk of recurrence if missed by surgeon. Careful inspection of duct is essential to achieve complete excision.

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