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Pleomorphic Adenoma of the Left Parotid Region: A Clinicopathological Case Report

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KEYWORDS

Pleomorphic adenoma ; Parotid gland; Salivary gland tumor; FNAC; Parotidectomy

ABSTRACT:

Introduction: Pleomorphic adenoma is the most common benign salivary gland tumor, predominantly affecting the parotid gland. It is characterized by a mixture of epithelial and myoepithelial elements within a variable stromal background, leading to its diverse histological appearance.

Objectives: To report and analyse a case of pleomorphic adenoma of the parotid region, focusing on diagnostic approach, surgical management, and clinical outcome.

Methods: Fine needle aspiration cytology supported the diagnosis of a benign salivary gland neoplasm. The patient underwent wide local excision with partial parotidectomy under general anaesthesia.

Results Histopathological examination confirmed pleomorphic adenoma. Postoperative healing was uneventful, with no signs of recurrence during follow-up.

Conclusions: This case highlights the importance of early diagnosis, appropriate surgical management, and long-term follow-up in preventing recurrence and malignant transformation.

1. Introduction

Pleomorphic adenoma, also referred to as a benign mixed tumor, is the most common salivary gland neoplasm, accounting for approximately 45–75% of all salivary gland tumors (1). It most frequently involves the parotid gland but may also arise in the submandibular and minor salivary glands (2). Histologically, it demonstrates a combination of epithelial and mesenchymal components, resulting in a characteristic pleomorphic appearance (3).

Clinically, pleomorphic adenomas present as slow-growing, painless masses, most commonly affecting individuals between the third and sixth decades of life, with a slight female predilection (4).

Although benign, long-standing lesions carry a risk of malignant transformation. Imaging modalities such as CT and MRI, along with fine needle aspiration cytology (FNAC), play a crucial role in diagnosis. Surgical excision remains the treatment of choice to prevent recurrence and complications (5).

2. Objectives

The objective of this study is to present a clinicopathological case of pleomorphic adenoma

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involving the parotid region, with emphasis on its clinical presentation, radiological and cytological evaluation, surgical management, and histopathological confirmation.

The report aims to highlight the importance of early diagnosis and complete surgical excision in preventing recurrence and malignant transformation, along with the need for long-term follow-up.

3. Methods

Patient Information

A 34-year-old male presented to the Department of Oral and Maxillofacial Surgery with a chief complaint of a painless swelling in the left cheek region.

History of Presenting Illness

The patient reported a small swelling (approximately 1 × 1 cm) inferior to the left ear pinna seven years ago, which gradually increased in size. Over the past three years, a noticeable increase in size was observed, although the swelling remained asymptomatic. No prior treatment was undertaken.

Clinical Examination

Extraoral examination revealed a well-defined solitary swelling measuring approximately 6 × 5 cm in the left parotid region [FIGURE 1]. The overlying skin appeared normal. Facial nerve function was intact.

On palpation, the swelling was firm, non-tender, non-fluctuant, and mobile. Bimanual palpation confirmed its location between the cheek mucosa and skin. Intraoral examination was unremarkable. No regional lymphadenopathy was noted.

Radiological Investigations

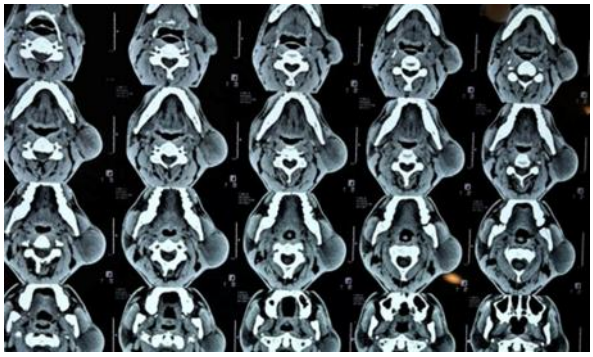
CT imaging demonstrated a well-defined soft tissue density lesion located in the superficial plane below the left mastoid and inferior to the parotid gland, with a mean density of 38 HU [FIGURE 2].

Ultrasonography revealed a well-defined heterogeneous lesion measuring approximately 5.19 × 3.2 cm, with internal vascularity and small cystic spaces.

Provisional Diagnosis

Benign salivary gland tumor, likely pleomorphic adenoma.

Cytological Findings



Fine needle aspiration cytology (FNAC) suggested a benign salivary gland lesion, categorized as Milan System Category IVA (Benign).

Surgical Procedure

Under general anaesthesia, surgical excision was planned. A skin crease incision was placed extending toward the mastoid region. Local infiltration with 2% lignocaine with adrenaline (1:80,000) was administered. Subdermal dissection was performed carefully in a retrograde manner to preserve facial nerve branches. The greater auricular nerve was identified and sacrificed. Wide local excision with partial parotidectomy was carried out, and the lesion was removed in toto along with its capsule [FIGURE 3]. The excised specimen measured approximately 5.9 × 4.3 × 4.5 cm and was firm and rubbery in consistency. Hemostasis was achieved, and closure was done in layers using 3-0 vicryl and 4-0 ethilon sutures.

4. Results

Microscopic examination revealed a well-encapsulated neoplasm composed of epithelial and myoepithelial cells

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arranged in a variable pattern within a chondromyxoid stroma. These findings confirmed the diagnosis of pleomorphic adenoma.

The postoperative period was uneventful. Healing was satisfactory with no evidence of infection, facial nerve deficit, or recurrence during follow-up. Long-term surveillance was advised.

5. Discussion

Pleomorphic adenoma is the most common benign tumor of the parotid gland, accounting for a significant proportion of salivary gland neoplasms. It predominantly involves the superficial lobe, with deep lobe involvement being less common.

Histologically, these tumors exhibit a mixture of epithelial and myoepithelial components within a variable stromal background, often described as chondromyxoid. Although benign, incomplete excision or enucleation can lead to recurrence due to capsular breach and tumor seeding (6).

Radiological imaging assists in defining the extent and nature of the lesion, while FNAC provides a preliminary diagnosis. Surgical excision with adequate margins remains the gold standard treatment, with success rates exceeding 95% (7,8,9).

Careful surgical technique is essential to avoid injury to the facial nerve. Regular follow-up is necessary to monitor for recurrence and rare malignant transformation into carcinoma ex pleomorphic adenoma (10).

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