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Uncommon Localization of Pleomorphic Adenoma: Submandibular Gland Case Report

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Abstract

Pleomorphic adenoma is the most common benign salivary gland tumor, but submandibular gland involvement is rare. We present a case of a middle-aged male with a slow-growing, painless swelling in the right submandibular region. Clinical examination, imaging, and fine needle aspiration cytology suggested pleomorphic adenoma. Complete surgical excision of the submandibular gland was performed, and histopathology confirmed the diagnosis. The patient recovered uneventfully, with no recurrence during follow-up. This case highlights the importance of early diagnosis and complete excision to prevent recurrence and malignant transformation.

Keywords: Pleomorphic adenoma, submandibular gland, benign salivary gland tumor, case report, sub mandibulectomy

Introduction

Pleomorphic adenoma accounts for 60–70% of salivary gland tumors, most commonly arising in the parotid gland. Submandibular gland involvement is rare, representing less than 10% of cases. The tumor is histologically diverse, composed of epithelial and myoepithelial cells within a mesenchymal-like stroma. Despite its benign nature, incomplete excision can lead to recurrence and, in rare cases, malignant transformation. This report describes a case of pleomorphic adenoma of the submandibular gland, emphasizing clinical presentation, management, and prognosis.

Case Presentation

Patient: 45 yr male came to OPD at INDO IRISH hospital, Ahilyanagar.

Chief Complaint: Gradual, painless swelling in the right submandibular region for 6 months

Examination: Firm, mobile, non-tender mass measuring 3.5 cm; no cervical lymphadenopathy

Investigations: • Ultrasound/: Well-defined hypoechoic lesion confined to the submandibular gland

FNAC: Biphasic population of epithelial and myxoid cells, suggestive of pleomorphic adenoma

Treatment: Sub mandibular gland excision performed under general anesthesia

Histopathology: Confirmed pleomorphic adenoma with epithelial and stromal components, no malignant features

Outcome: Uneventful recovery, no recurrence at 12-month follow-up

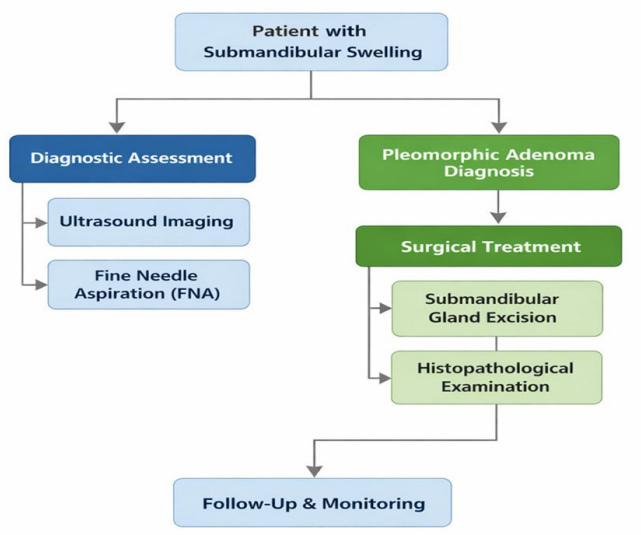

Figure 1: Diagnostic and Treatment Pathway for Submandibular Pleomorphic Adenoma

Incision and Exposure

A curvilinear incision is made approximately 2 cm below the inferior border of the mandible, parallel to the mandibular margin. Skin and subcutaneous tissue are incised, followed by division of the platysma muscle. The marginal mandibular branch of the facial nerve is identified and preserved. The investing layer of deep cervical fascia is incised to expose the submandibular gland.

Dissection and Gland Mobilization:

The gland is carefully dissected free from surrounding tissues. The facial artery and vein, which often course through or near the gland, are ligated and divided. The mylohyoid muscle is retracted to expose the deep lobe of the gland. The Wharton's duct (submandibular duct) is identified, ligated, and divided near its origin. Care is taken to preserve the lingual nerve, which lies in close proximity to the duct.

Excision and Hemostasis:

The gland is completely excised along with its capsule. Meticulous hemostasis is achieved using cautery or ligatures. The wound is irrigated with saline.

Closure:

A suction drain may be placed to prevent hematoma formation. The platysma and subcutaneous tissue are closed with absorbable sutures. Skin is closed with fine sutures or staples for optimal cosmetic outcome.

Discussion

Pleomorphic adenoma of the submandibular gland is uncommon, making clinical suspicion essential. Differential diagnoses include sialadenitis, lymphadenopathy, and malignant salivary gland tumors. FNAC is a useful preoperative tool, but definitive diagnosis requires histopathology. The standard treatment is complete excision of the gland, as enucleation carries a high risk of recurrence. Prognosis is excellent with complete removal, though long-term follow-up is recommended due to recurrence potential and rare malignant transformation.

Conclusion

Pleomorphic adenoma of the submandibular gland, though rare, should be considered in cases of chronic, painless submandibular swelling. Early diagnosis and complete surgical excision are crucial for favorable outcomes. Case reports such as this reinforce the importance of histopathological confirmation and vigilant follow-up.

Figure 2: Clinical photograph showing submandibular swelling.

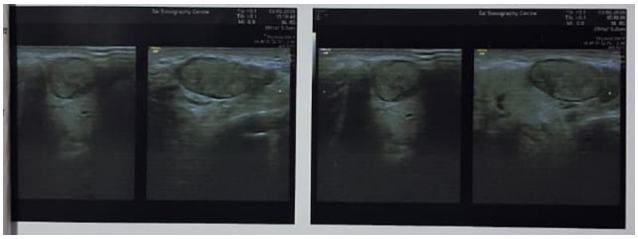

Figure 3: USG image of the lesion.

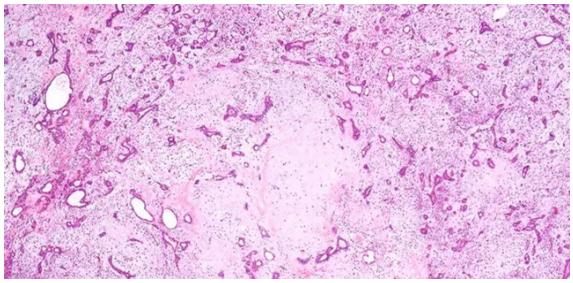

Figure 4: Histopathology slide showing epithelial and stromal components.

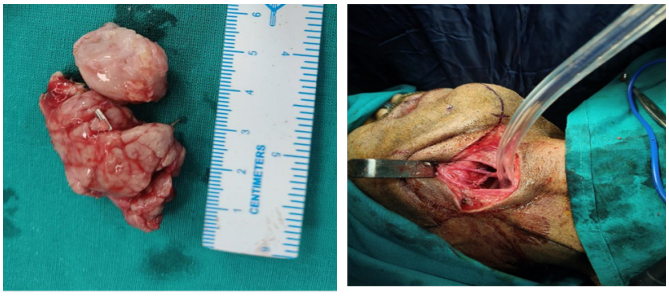

Figure 5: Submandibular gland excision.

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