

# A Case Report on Submandibular Gland Pleomorphic Adenoma

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## Abstract

*Pleomorphic adenoma is a common benign salivary gland neoplasm characterised by proliferation of parenchymatous glandular cells along with myoepithelial components. It is the most common type of salivary gland tumour and the most common tumour of parotid gland. It is also known as Mixed type salivary gland tumour. It refers to its dual origin from epithelial and myoepithelial elements.*

*A 23-year-old male presented with complaints of firm palpable mass in right submandibular region. It was slow growing and painless in nature. On radiological examination, well defined radiolucent mass was noticed. Surgical excision was done and sent for histopathological examination.*

**Keywords:** *pleomorphic adenoma, submandibular gland*

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## I. Introduction

Salivary gland tumours are rare and make up to 3% of head and neck tumours. Almost 90% of benign neoplasm of the major salivary gland is associated with parotid gland. Pleomorphic adenoma comprises 80-90% of these parotid neoplasms. Pleomorphic adenomas of the submandibular and the sublingual glands are uncommon and is usually 8- 10%.

## II. Case Report

A 21-year-old male, student, presented with a swelling of right side of neck near the jaw, for 6 months. The swelling is gradually progressing, and painless. There is no history of difficulty in swallowing/breathing. No history of hoarseness of voice. No history of fever. No significant family history.

On general examination, patient is conscious, coherent, with no pallor, not icteric, no cyanosis, no clubbing, no generalised lymphadenopathy, and no pedal edema. His vitals were BP-120/80mmhg; pulse rate-78/minute. Respiratory rate-14/minute; Spo<sub>2</sub>-100% in room air, temperature-98.4F. On systemic examination, CVS- S1&S2 heard and no murmur. RS- Bronchogenic breath sounds heard equally on both sides. Abdomen-soft, no organomegaly, bowel sounds present, CNS- no focal neurological deficit, GCS 15/15.

On local examination, by inspection a single spherical swelling of size 2\*3 cm present below the body of mandible of right side with smooth surface. No movement with deglutition and protrusion of tongue. Skin over the swelling appears normal. No visible pulsations or dilated veins. On palpation, inspeitory findings are confirmed. The swelling is firm in nature and is not freely mobile. Not tender and no warmth. Non translucent, non-pulsatile and not reducing in size with palpation. No cough impulse seen. Carotid pulse felt bilaterally. No cervical lymph node enlargement.



Figure 1 & 2: clinical photograph of the patient with the swelling

Routine blood investigations were done. Ultrasound report suggested well defined hypoechoic lesion measuring 2.4\*1.8 cm in the right submandibular region. FNAC report noted cellular smear with cells in loose clusters, discrete cells of plasmoid nature and few spindle shaped myoepithelial cells in stromal matrix, suggestive of pleomorphic adenoma.

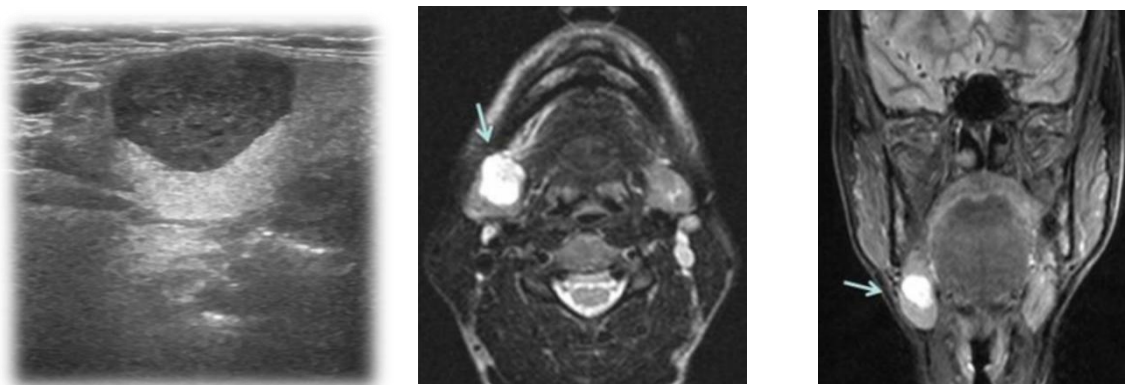


Figure 3, 4 & 5: Ultrasound and MRI views of submandibular swelling

MRI of neck showed well defined lobulated lesion noted at right submandibular gland measuring 2.7\*2.2\*2.4 cm, suggestive of benign tumour mass most likely pleomorphic adenoma. No significant lymph node enlargement noted.

The patient was posted for explorative and excisional biopsy of submandibular gland after getting proper consent. With a standard submandibular incision, the submandibular gland and the mass was excised and sent for histopathological examination.



Figure 6 & 7: Surgical picture of submandibular swelling

Histopathology report confirmed the diagnosis of submandibular pleomorphic adenoma. Histopathologic sections revealed darkly stained tumor cells lying in chondromyxoid mesenchyme. Patient was discharged on 8th post operative day after suture removal. Wound healed well. Patient was followed up for 6 months.

### III. Discussion

The most frequent neoplasms in the submandibular glands are: Pleomorphic adenoma (36%), adenoid cystic carcinoma (25%), mucoepidermoid carcinoma (12%) and malignant mixed tumor (10%). Pleomorphic adenoma is a benign salivary gland neoplasm characterised by neoplastic proliferation of parenchymatous glandular cells along with myoepithelial components. Most common benign tumour of salivary gland, accounts for 90% of all salivary gland tumours. It is the common benign tumor affecting submandibular gland, occurring commonly between the 3rd and 5th decade of life. Mixed tumour type: contain both epithelial and mesenchymal elements. Encapsulated, slow growing tumour.

CT scan or MRI are the gold standard radiological tools for lesion arising from the major or minor salivary gland. The excision of the tumour is done along with complete removal of submandibular gland. Injury to the marginal mandibular nerve is the most common complication due to the stretching or compression of the nerve. Incomplete removal of the glandular tissue causes chance for definitive recurrence. Pleomorphic adenoma are benign tumours with well documented transformation to malignancy, if left untreated.

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