

Benign But Rare: A Case Of Pleomorphic Adenoma In The Submandibular Gland

Dr Madduru Divya Jyothi¹, Dr Madan Raj. R², Dr. K.Kishore

(Post Graduate, Department Of Ent, Gmc Kadapa, Ntruhs Andhra Pradesh

(Post Graduate, Department, Of Ent, Gmc Kadapa , Ntruhs Andhra Pradesh

(Associate Professor, Department, Of Ent, Gmc Kadapa , Ntruhs Andhra Pradesh

Abstract:

Background: The primary objective of this study is to present a detailed case report of a pleomorphic adenoma occurring in the submandibular gland. This includes highlighting the rarity of the condition, diagnostic challenges and methodologies employed to accurately identify the tumor. Additionally, the study aims to discuss the chosen treatment strategy and surgical outcome.

Materials and Methods: A 25-year-old male patient presented with a painless, progressively enlarging mass in the submandibular region for the past 6 months. Initial diagnostic tools included a thorough clinical examination, followed by routine blood investigations and ultrasonography. Fine needle aspiration cytology (FNAC) was performed, providing a preliminary diagnosis. The patient subsequently underwent a submandibular gland with the swelling excision under general anesthesia. The excised gland was then subjected to histopathological examination to confirm the diagnosis of pleomorphic adenoma. Post-operative follow-up to monitor for recurrence and any complications was done.

Results: The patient reported a slowly enlarging, non-tender mass in the submandibular region, with no associated symptoms such as pain or difficulty swallowing. Imaging studies revealed a well-defined mild lobulated hypoechoic mass with calcifications indicative of a benign tumor, and FNAC findings were consistent with pleomorphic adenoma. The mass was successfully excised surgically, with no immediate post-operative complications. Histopathological analysis post operatively of the specimen confirmed the diagnosis of pleomorphic adenoma, showing typical histological features, including a mixture of epithelial and stromal elements. The patient's post-operative recovery was uneventful, with no recurrence noted during a 12-month follow-up period.

Conclusion: This case study underscores the importance of a comprehensive diagnostic approach for pleomorphic adenoma of the submandibular gland, incorporating clinical examination, imaging, and FNAC. The surgical excision provided effective treatment with clear margins, and regular post-operative follow-up ensured early detection of any recurrence.

Keywords: Submandibular gland, Pleomorphic adenoma

Date of Submission: 26-07-2025

Date of Acceptance: 06-08-2025

I. Introduction

Pleomorphic adenoma (PA) is the most common benign tumor of the salivary glands, accounting for 70–80% of benign salivary gland neoplasms. While it predominantly arise in the parotid gland, they can also develop in the submandibular gland-8–10%. Exact etiology still remains unknown though various factors have been implicated in its development. It is generally slow-growing and present as painless and firm mass. Surgical excision is the preferred line of treatment with regular post-operative follow-up to ensure early detection of any recurrence.

II. Material And Methods

Case report: A 25 year old male patient presented with a painless, progressively enlarging mass in the submandibular region for the past 6 months with no other associated symptoms.

Physical examination: a 2x2cm solitary swelling in right submandibular neck region with smooth surface, firm in consistency with well defined rgins, non-tender, mobile with skin pinchability present with no other palpable neck mass.



FIGURE 1:

Ultrasonography revealed a well-defined, mildly lobulated hypoechoic mass with calcifications, indicative of a benign tumor- pleomorphic adenoma. (Fig 2)



FIGURE 2: Ultrasonography of lesion

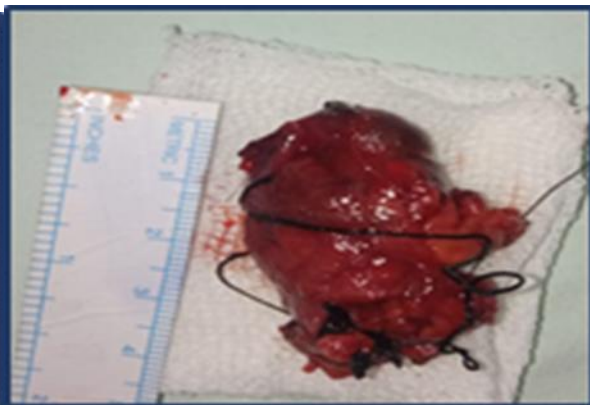


FIGURE 3: EXICISED GROSS SPECIMEN

FNAC findings were consistent with pleomorphic adenoma. The patient underwent tumor with submandibular gland excision under general anesthesia. Histopathological analysis confirmed the diagnosis, showing typical features of pleomorphic adenoma, including a mixture of epithelial and stromal elements. (Fig 3)

III. Result & Discussion

In this study, the patient was provisionally diagnosed with pleomorphic adenoma of the right submandibular gland with the aid of ultrasonography and FNAC and complete excision of the tumor with submandibular gland was done in toto. Post-operative recovery was uneventful with no recurrence noted during the follow-up period. (Fig 5)

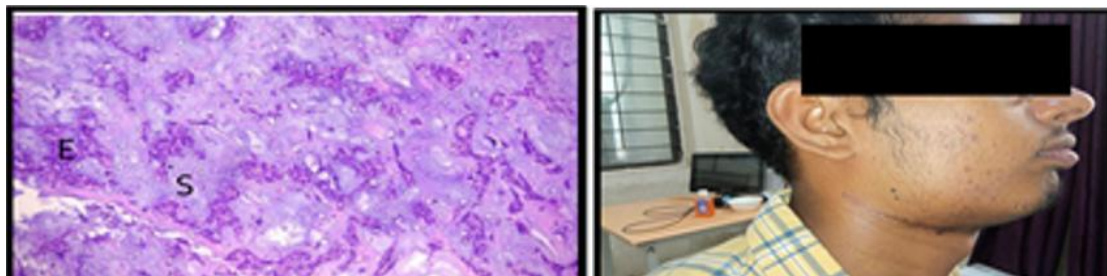


Figure 5: Histopathological Slide & Post-Operative Healed Surgical Scar

Pleomorphic adenoma occurs in the submandibular gland in about 8-10% of cases. It is also known as “benign mixed tumors.” These benign tumors are known for their morphological diversity and slow growth, often presenting as non-tender nodules that can occasionally reach significant sizes with a 5–10% risk of malignant transformation into carcinoma ex pleomorphic adenoma (CXPA), particularly in recurrent cases. Diagnosis typically involves imaging modalities such as USG, CT or MRI if tumor is larger in size, while fine-needle aspiration cytology (FNAC) aids in preoperative evaluation. Complete surgical excision of the tumor along with

the submandibular gland is the treatment of choice, as incomplete removal increases the risk of recurrence. Early and definitive surgical management offers excellent long-term outcomes.

IV. Conclusion

This case study underscores the importance of a comprehensive diagnostic approach for pleomorphic adenoma of the submandibular gland, incorporating clinical examination, imaging, and FNAC. The surgical excision provided effective treatment with clear margins, and regular post-operative follow-up ensured early detection of any recurrence.

References

- [1] Wu Z Et Al.(2022). Surgical Treatment Of A Giant Pleomorphic Adenoma Of The Submandibular Gland: A Case Report. Front. Surg. 8:800563.
- [2] Kumar Et Al. Pleomorphic Adenoma Of Submandibular Salivary Gland: A Study Of Cases At Igims, PATNA.JIGM.6(2):P 134-137, Jul-Dec 2020.
- [3] Gajbhiye AS Et Al.Pleomorphic Adenoma Of Submandibular Gland: Not So Common Occurrence. Int Surg J (2018);5:657-61.
- [4] Rai S Et Al.Pleomorphic Adenoma Of Submandibular Gland: An Uncommon Occurrence. Natl J Maxillofac Surg. 2011 Jan;2(1):66-8.