Volume-13/Issue-I/June 2025/ISSN No.-2321-3450

CASE REPORT

DOI: htttp: /doi.org/10.36611/upjohns/volume13/Issue1/1
Date received: 16.05.2025 / Date Published : 30.06.2025

GIANT PLEOMORPHIC ADENOMA OF THE SUBMANDIBULAR GLAND: A CASE REPORT

Authors- (1) Ashutosh Kumar Pandey, (2) Yuvraj Gupta, (3) Hitendra Prakash Singh*

Authors Affiliations: (1) Consultant, Remedy Plus super-speciality hospital, Basti, Uttar Pradesh, India (2) Junior Resident, (3) Professor, Department of Otorhinolaryngology & Head-Neck surgery, KGMU, Lucknow, Uttar Pradesh, India

ABSTRACT

INTRODUCTION

Pleomorphic adenoma is the most common benign tumor of the salivary glands, typically presenting as a slow-growing, painless mass. While it most frequently arises in the parotid gland, it can also affect the submandibular gland, albeit less commonly. Although generally small in size, cases of giant pleomorphic adenomas are rare, especially in the submandibular region.

CASE REPORT

We present a 45-year-old male presented with a gradually enlarging mass on the left side of the face and neck, which had been developing over the past six years. Clinical examination revealed a large, firm, non-tender mass involving the left submandibular region without any signs of facial nerve dysfunction.

Imaging studies suggested a benign tumour arising from the submandibular gland. Surgical excision was performed via a transcervical approach. Histopathological analysis revealed a classic pleomorphic adenoma. Postoperatively, the patient recovered well with excellent aesthetic and functional outcomes.

CONCLUSION

Giant pleomorphic adenomas of the submandibular gland are exceedingly rare. Despite their size, they can be successfully managed with complete surgical excision and careful preservation of adjacent neurovascular structures. Long-term follow-up is essential to monitor for recurrence. This case highlights the importance of early diagnosis and timely surgical intervention to prevent excessive tumor growth and potential complications.

KEYWORDS

Salivary gland tumor, pleomorphic adenoma

INTRODUCTION

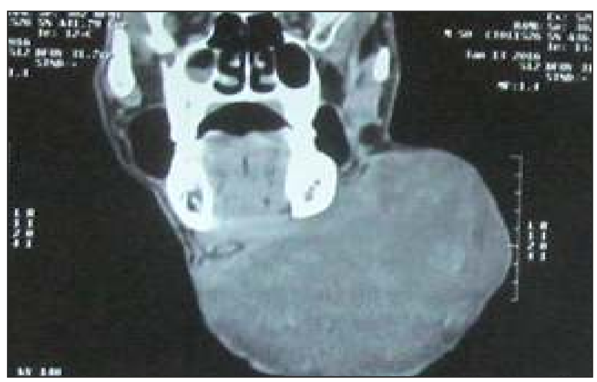
Salivary gland neoplasm occurs in different locations, including the parotid, submandibular gland, sublingual gland, and minor salivary glands and represent various histological pictures. The most of the neoplasms of the salivary glands are benign (80%) but sometimes tumors show the ability to transform into malignant lesions.1-2 Thus, it becomes very essential to diagnose early for the proper treatment. 11 different benign epithelial salivary gland tumors are recognised by The World Health Organization (WHO) in 2017.3

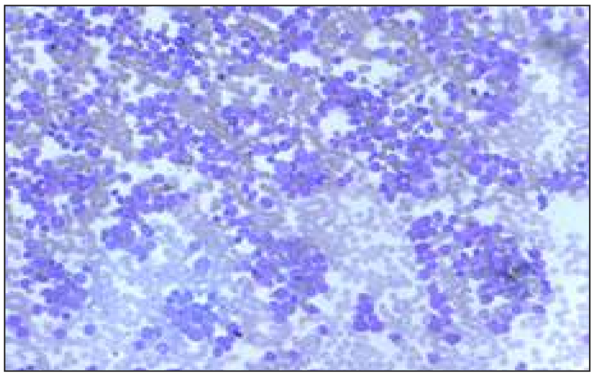
Pleomorphic adenoma (PA) is the most common subtype of salivary gland tumors followed by Warthin's tumor (WT) and other tumors on decreasing order.2-3

Authors hereby present a case report of a giant pleomorphic adenoma arising from submandibular gland in a male patient, which was surgically excised with no recurrence on follow up till date.

CASE REPORT

A 45 years old male patient presented in the OPD of the department of Otorhinolaryngology and Head-Neck Surgery with history of gradually progressive tumor in the left upper part of the neck for 6 years. The swelling was insidious in onset, slow growing and painless. Patient has no complain of difficulty in swallowing or difficulty in breathing. There is no any associated comorbidity. On clinical examination – On inspection a firm, bosselated mass seen in left submandibular region approximately 40×25×19 cm in size (Fig.1). On palpation, mass was multilobulated, firm, non-tender & with well-defined borders. Skin over the mass was showing some areas of ulcerations. Antero-posteriorly from the angle of the mandible up to 2cm right from the midline of the mandible. Superoinferiorly extend from lower border of mandible to approximately 19 cm below the symphysis menti. As the tumor have huge dimensions but the facial nerve function in intact. Oral cavity examined and found within normal limits. Video laryngoscopy was done and found within normal limits. FNAC was done which was suggestive of pleomorphic adenoma. CECT neck from skull base to clavicle was done which shows a well defined, heterogenous mass involving right submandibular gland with areas of calcification (Fig.2). Patient was planned for surgical excision. Patient underwent complete excision of right submandibular gland under general anaesthesia. Internal jugular vein and Internal carotid artery identified and secured. Further dissection was done and the mass was removed completely. Surgical defect was closed primarily. On gross examination, the tumor was lobulated, irregular, having well defined margins and mass was 36×20×15 cm in dimensions and weighed 3.5kg(Fig. 3). Histopathological examination done and consistent with the diagnosis of pleomorphic adenoma (Fig. 4). Thus, a definitive diagnosis of Pleomorphic adenoma of right submandibular salivary gland was made. Intra-operative and post-operative periods were uneventful. Patient was on regular follow up for 2 years and no recurrence was seen (Fig.5).





DISCUSSION

Pleomorphic adenoma is commonest salivary gland tumor but the giant pleomorphic adenoma is very rare. Despite of its gigantic size, malignant changes are rarely seen. These tumors are usually painless, smooth, firm and asymptomatic until they attain major sizes mostly in the form of pressure symptoms. It is usually well demarcated from the surrounding tissue by a pseudo-capsule. In huge sizes, they could develop a variegated appearance with areas of haemorrhage, necrosis and calcification. Giant tumors commonly have a lobulated delineation, which supports the diagnosis.

The weight of pleomorphic adenoma ranging from 1 kg to 27 kg5. In our case, the size of tumor was 40×25×19 cm and weighed 3.5 kg. The largest ever recorded pleomorphic adenoma arising from the submandibular gland weighed 8.1 kg.4

A similar case of the giant pleomorphic adenoma of submandibular salivary gland in a female patient, weighed 4.35 kg treated by surgery without complications.6

The tumor was surgically excised and closed primarily and follow up was done. No recurrence was found till date. It should be managed through complete excision of the tumor reaching completely free surgical margin because the involvement of free surgical margins can lead to recurrence.

In a similar case, complete resection of the tumour was done along with the submandibular salivary gland as the tumour was arising from the gland, with preservation of the majority of the overlying healthy skin and the marginal mandibular nerve and no recurrence was found till date.6

A case of huge pleomorphic adenoma started with a left inferolateral incision to separate the tumor from the neck great vessels. The tumor had a very wide base therefore the defect couldn't be closed primarily and a thiersch graft has to be used. 4

Another case of pleomorphic adenoma was surgically managed with a standard submandibular incision, the submandibular gland and the mass was. Primary closure was done in a layer-wise manner. Regular follow up was done for almost 4 years and no recurrence noted9.

The malignant transformation in adenomas of salivary gland is found in a range from 1.9 to 23.3%7. The risk of transformation into malignancy increases with a long history of appearance, recurrence, the advanced age of the patient, and location in the major salivary gland. In our case, the malignant changes were not present.

CECT of neck from skull base to clavicle in our case shows a well-defined, heterogenous mass involving right submandibular gland with areas of calcification sparing all major vasculatures.

In a similar case CEMRI was done which suggested huge heterogeneously enhancing heterointense mass lesion in the anterior neck possibly arising from left submandibular space demonstrating lobulated solid cystic areas and necrotic areas with displacement of adjacent structures but no significant infiltration/ erosion of bone.6

The purpose of presenting such cases is to elucidate the problem of patients especially in the developing countries, who neglect such conditions due to lack of awareness and with time it achieves such huge size.

CONCLUSION

Pleomorphic adenoma is the commonest salivary gland tumor. Sometimes due to lack of awareness or fear of surgery, it becomes gigantic. Despite of its huge size, the malignant transformation is rarely seen. The treatment is complete excision of the tumor and if done carefully the recurrence is rarely seen.

LEARNING POINTS

- Pleomorphic adenoma with a huge size is very rare.
- Pleomorphic adenoma becomes huge due to lack of awareness or fear of surgery.
- Despite of its huge shape and size, the malignant transformation is very rare.
- The treatment is complete surgical excision.
- Recurrence is very rare if excised carefully.

DECLARATION

Ethics approval and consent to participate: No ethical approval is required

Author's contribution: All the authors contributed to the study conception and design.

Competing interests: The authors declare that they have no competing interests.

Funding: The study was self-funded.

REFERENCES

1. De Oliveira FA, Duarte EC, Taveira CT, Máximo AA, de Aquino EC, Alencar Rde C, Vencio EF. Salivary gland tumor: a review of 599 cases in a Brazilian population. Head Neck Pathol. 2009 Dec;3(4):271-5.

2. Israel Y, Rachmiel A, Ziv G, Nagler R. Benign and Malignant Salivary Gland Tumors - Clinical and Demographic Characteristics. Anticancer Res. 2016 Aug;36(8):4151-4.

3. Hellquist H, Paiva-Correia A, Vander Poorten V, Quer M, Hernandez-Prera JC, Andreasen S, Zbären P, Skalova A, Rinaldo A, Ferlito A. Analysis of the Clinical Relevance of Histological Classification of Benign Epithelial Salivary Gland Tumours. Adv Ther. 2019 Aug;36(8):1950-1974.

4. Abdelkhalek M, Elmetwally M, Mazy A, Gad M, Elsaid A, Awny S, Refky B, Abdallah A, Elalfy AF, Shokeir FA, Abdallah S, Elfeky A, Aboelamayem R, Hegazy MA. Gigantic submandibular pleomorphic adenoma: A rare case report. Int J Surg Case Rep. 2019;65:91-96. doi: 10.1016/j.ijscr.2019.10.033. Epub 2019 Oct 24.

5. Buenting J.E., Smith T.L., Holmes D.K. Giant pleomorphic adenoma of the parotid gland: case report and review of the literature. Ear Nose Throat J. 1998;77 634, 637–638, 640.

6. Rai A, Sharma S, Shrivastava P, Singh M. A huge pleomorphic adenoma of the submandibular salivary gland. BMJ Case Rep. 2018 Mar 16;2018:bcr2017222249.
7. Perumal CJ, Meyer M, Mohamed A (2012) A giant pleomorphic adenoma of the submandibular salivary gland: a case report Craniomaxillofacial Trauma Reconstruction 5(3):185–188.
8. Yamamoto Y (1994) Clinical signs and histology of carcinoma in pleomorphic adenoma. Otologia 87:1320–1324.
9. Rai S, Sodhi SP, Sandhu SV. Pleomorphic adenoma of submandibular gland: An uncommon occurrence. Natl J Maxillofacial Surg. 2011 Jan;2(1):66-8.

***Corresponding Author-**
Dr. Hitendra Prakash Singh
Professor, Dept. Of Otorhinolaryngology & Head-Neck Surgery, KGMU, Lucknow
Mobile: 9456048923
Email: drhpsingh77@gmail.com
Orcid ID- https:/orcid.org/0000-0003-2690-2494

How to cite this article

Pandey A.K., etal; Giant Pleomorphic Adenoma of the Submandibular Gland: A Case Report-- UPJOHNS; June 25; 13(1); page: 39-43