CASE REPORT

Large Pleomorphic Adenoma of the Submandibular Gland in a Young Tanzanian Woman: A Case Report

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ABSTRACT

Background: Pleomorphic adenoma is the most common benign salivary gland tumour, but submandibular involvement is uncommon. Delayed presentation may permit substantial enlargement.

Case presentation: A 26-year-old Tanzanian woman presented with a painless right submandibular swelling that had enlarged over five years. Ultrasonography and fine-needle aspiration cytology supported pleomorphic adenoma. The tumour and involved submandibular gland were excised en bloc through a transcervical approach with preservation of marginal mandibular nerve function. Histopathology confirmed pleomorphic adenoma with tumour-free margins and no malignant transformation. At 24 months, clinical examination and ultrasonography showed no recurrence.

Conclusion: Submandibular pleomorphic adenoma should be considered in young adults with chronic painless submandibular swelling. Complete excision can provide favourable functional and cosmetic outcomes, but long-term surveillance remains necessary because late recurrence may occur.

INTRODUCTION

Pleomorphic adenoma is the most common benign salivary gland tumour and occurs more often in the parotid than in the submandibular gland.[1,2] Histologically, it contains epithelial and myoepithelial components within a variable stromal background.[1,4]

It usually presents as a slow-growing, painless, mobile mass.[2] Long-standing lesions may become large; malignant transformation is uncommon.[4,13] Complete excision is standard treatment.[4,6] Delayed presentation may reflect limited specialist access, cost and use of traditional treatment.[7] This case illustrates successful management of a large lesion without cross-sectional imaging.

Case Report

A 26-year-old woman presented to the Department of Oral and Dental Services, Dodoma Regional

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Referral Hospital, Tanzania, in February 2024 with a five-year history of a progressively enlarging, painless swelling on the right side of the lower face. She initially received analgesics and antibiotics at a local health facility without improvement. In late 2022, a traditional healer performed skin incisions and administered local herbs, also without benefit.

She had no chronic illnesses, previous surgery or regular medication. She denied tobacco or alcohol use, and there was no relevant family history of salivary gland or other head and neck neoplasms. She denied dysphagia, odynophagia, dyspnoea, weight loss, fever or facial weakness. Examination showed marked facial asymmetry due to a large, firm, non-tender, mobile right submandibular mass extending into the upper cervical region (Figure 1). The overlying skin was intact, cervical lymphadenopathy was absent and intraoral examination was unremarkable.

Figure 1. Preoperative clinical presentation showing a large right submandibular mass after approximately five years of progressive enlargement.

Pleomorphic adenoma of the right submandibular gland was the leading diagnosis. Low-grade mucoepidermoid carcinoma and carcinoma ex pleomorphic adenoma were considered less likely because of the slow painless course, mobility, absence of lymphadenopathy, constitutional symptoms and clinical invasion. Ultrasonography and fine-needle aspiration cytology supported pleomorphic adenoma; a Milan System diagnostic category was not reported. Computed tomography and magnetic resonance imaging were not obtained because of financial and resource constraints.

A transcervical incision provided exposure of the tumour (Figure 2). Careful dissection identified and preserved the marginal mandibular branch of the facial nerve and protected adjacent vascular structures. The tumour and involved submandibular gland were excised en bloc without capsular rupture. Haemostasis was secured and the wound was closed in layers. The specimen measured approximately 13 × 7 × 7 cm. Postoperative recovery was uneventful, with preserved facial nerve function, satisfactory wound healing and an acceptable cosmetic outcome.

Figure 2. Intraoperative appearance of the multinodular, well-circumscribed lesion; the excised specimen measured approximately 13 × 7 × 7 cm.

Histopathology showed ducts, tubules and nests of epithelial and myoepithelial cells within a chondromyxoid stroma. There was no atypia, increased mitotic activity, necrosis or infiltrative growth. Resection margins were tumour-free, with no malignant transformation (Figure 3a–c). At the documented 24-month follow-up, clinical examination and ultrasonography showed no recurrence; facial nerve function remained intact and the patient was satisfied with the functional and cosmetic outcome (Figure 4a–b).

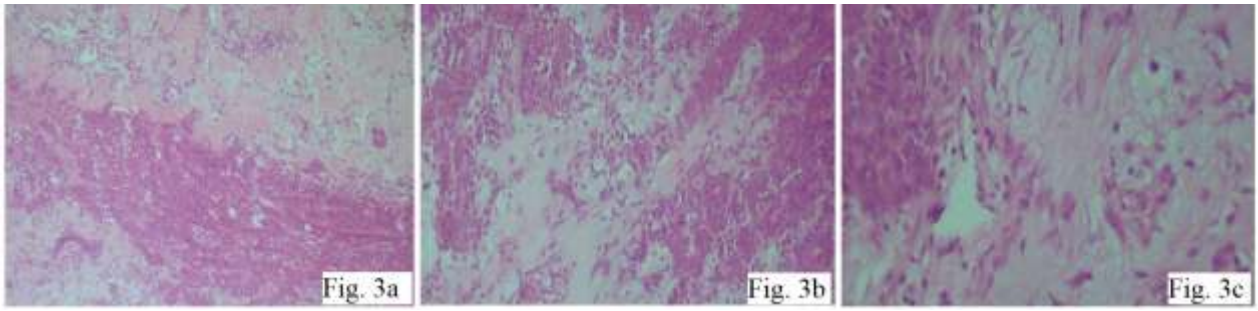

Figure 3. Haematoxylin and eosin sections. (a) Low-power view showing a well-demarcated neoplasm with epithelial areas and abundant myxoid to chondromyxoid stroma. (b) Intermediate-power view showing cords, nests and duct-like epithelial structures with surrounding myoepithelial cells. (c) High-power view showing plasmacytoid myoepithelial cells in myxoid stroma without significant atypia, mitotic activity or malignant features.

Figure 4. Clinical appearance at 24-month postoperative follow-up, with no clinical recurrence and preserved facial nerve function.

Table 1. Clinical timeline

Time	Clinical event
Approximately five years before presentation	Onset of a small, painless right submandibular swelling followed by gradual enlargement.
Time not specified	Local health-facility consultation; analgesics and antibiotics were given without improvement.
Late 2022	Traditional healer performed skin incisions and administered local herbs, without benefit.
February 2024	Presentation to Dodoma Regional Referral Hospital; clinical assessment, ultrasonography and FNAC supported pleomorphic adenoma.
After diagnostic assessment	Transcervical en-bloc excision of the tumour with the involved submandibular gland; histopathology confirmed pleomorphic adenoma with tumour-free margins.
24 months after surgery	Clinical examination and ultrasonography showed no recurrence; facial nerve function remained intact.

Patient perspective: A formal patient perspective was not obtained during care and therefore is not reported.

DISCUSSION

Submandibular pleomorphic adenoma is less common than parotid disease.[1,2] Published cases include lesions of 16 × 15 × 12 cm in a 20-year-old woman, 15 × 13 cm in a 52-year-old woman and 34 × 26 × 20 cm in a 75-year-old woman.[8–10] The present 13 × 7 × 7 cm lesion is therefore better described as large rather than "giant". Its young age at presentation, five-year delay and management without CT or MRI remain instructive.

Pleomorphic adenoma most often occurs in middle adulthood but can affect younger adults.[2] Here, delayed presentation followed non-specialist and traditional treatment, consistent with barriers reported in Tanzania.[7] The case shows that careful clinical assessment, ultrasonography, cytology and meticulous surgery can support safe management when advanced imaging is unavailable.

CT and MRI better define deep tumour extent, neurovascular relationships and suspicious features; their absence limited preoperative assessment. Clinical examination, ultrasonography and FNAC provided the available information for planning.[11] Large tumours can distort anatomy, making adequate exposure and preservation of the marginal mandibular nerve important.[6]

Complete excision of the involved gland is appropriate management for submandibular pleomorphic adenoma.[4,6] Incomplete excision or enucleation increases recurrence risk because microscopic extensions may lie beyond the pseudocapsule.[6] Histopathology remains definitive for diagnosis; in this case, the biphasic epithelial–myoepithelial architecture in chondromyxoid stroma, tumour-free margins and absence of malignant features supported the diagnosis.

The principal limitations were lack of preoperative cross-sectional imaging, absence of a formal patient perspective and lack of reported intermediate follow-up intervals. Although the documented 24-month clinical and ultrasonographic follow-up is reassuring, it does not exclude late recurrence. Pleomorphic adenoma can recur years after primary surgery, particularly after inadequate excision, and continued long-term surveillance is warranted.[5,12]

CONCLUSION

Pleomorphic adenoma should be considered in young adults with long-standing painless submandibular swelling. Delayed presentation may increase tumour size and surgical complexity. When cross-sectional imaging is unavailable, careful clinical assessment, ultrasonography and cytology can guide management. Complete excision with neurovascular preservation can achieve favourable outcomes, but long-term follow-up remains necessary.

Declarations

Ethics Approval and Consent to Participate: Ethical approval was obtained from the relevant institutional review authority. Written informed consent was obtained from the patient for publication of the case details and accompanying clinical photographs, including potentially identifiable facial images.

Availability of Data and Materials: All relevant data supporting the findings of this report are included within the article.

Competing Interests: The authors declare no competing interests.

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