

Pleomorphic salivary adenoma: a 10-year case series

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Abstract

Pleomorphic salivary adenoma (PSA) is the most common salivary gland benign neoplasm which, depending on how it manifests, often poses remarkable challenges related to its accurate diagnosis and the approach to its optimal management. In this paper, a case series of 47 PSA lesions managed at a Nairobi centre in Kenya is presented with a highlight documentation of a giant PSA in the parotid spanning a 6-year duration in a 16-year-old girl.

Key words: Pleomorphic salivary adenoma, Kenya.

Introduction

Approximately 75 to 85 per cent of salivary gland neoplasms occur in the parotid gland among which 70 to 80 per cent are benign, the most common being pleomorphic salivary adenoma (PSA) ⁶. Usually PSA are found as solitary unilateral, firm and mobile slow-growing asymptomatic nodules. Those of the minor salivary glands occur most commonly in the palate followed by the lip and buccal mucosa ⁹.

Over recent years there has emerged a rare but nonetheless well-documented subgroup of PSA entities that require additional awareness and precise recognition in terms of their propensity for future aggressiveness ³. Histopathologically, PSA is an epithelial tumour of complex morphology, possessing epithelial and myoepithelial elements arranged in a variety of patterns embedded in a mucopolysaccharide stroma. Encapsulation is variable, with possibilities of capsular penetration or perforation by the tumour ^{2,4}. We present a 10-year case series managed at our centre in Nairobi, Kenya.

Patients and Method

An analysis was performed of the clinico-histopathologic characteristics of 47 cases of PSA who presented for treatment at the Department of Oral and Maxillofacial Surgery – Oral Pathology & Oral

Medicine, at the University of Nairobi Dental Hospital over a 10-year period. Based on the presenting clinical features of PSA, all the cases underwent excisional biopsy procedures to extirpate the lesions which were then all verified histopathologically utilizing the haematoxylin and eosin technique.

Results

The distribution of PSA lesions according to age is presented in Table 1. Evidently, many of these lesions were more common during the first through the 3rd decades of life. In this series there was a remarkable preponderance of PSA among females than males at a ratio of 2:1. The site distribution of the lesions is shown in Table 2. The bulk of the tumours were diagnosed in the palate in this series.

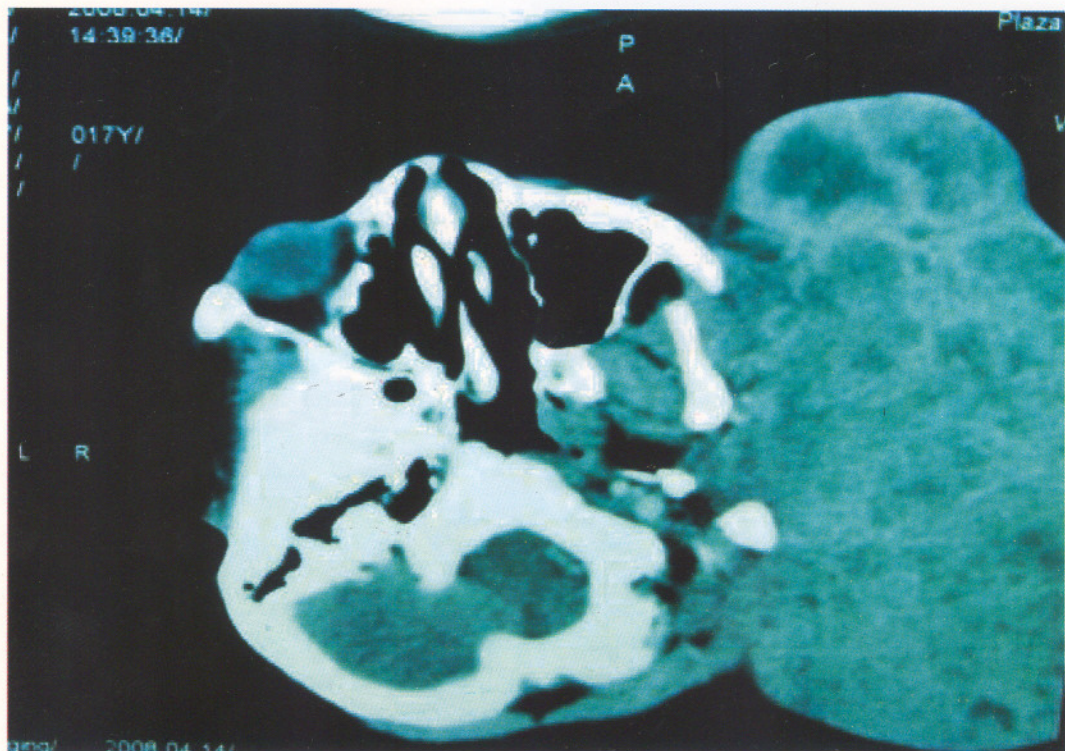
Table 1: Distribution of PSA lesions according to age

Age group (years)	Number of PSA lesions
0 – 10	2
11 – 20	8
21 – 30	10
31 – 40	7
41 – 50	12
51 – 60	6
61 – 60	2
Total	47

Table 2: Site distribution of the lesions according to site

Site	Number of PSA lesions
Palate (hard, soft)	33
Upper lip	4
Parotid glands	4
Submandibular glands	4
Buccal area	1
Tongue	1
Total	47

Remarkably, among the four parotid lesions, there was a 16-year-old girl who presented with a long-standing (6 years) left parotid tumour (Figs. 1 & 2) which weighed 2.9 Kg after extirpation. The histopathology reported sheets of epitheloid cells embedded in a mucopolysaccharide stroma. The epitheloid cells were normochromic with normal morphology and mitotic activity. There was no evidence of malignant transformation (Fig. 3). The tumour-free bed was successfully closed utilizing a partial left temporalis muscle to cushion the exposed mandible and local myocutaneous tissue mobilization (Fig. 4).

**Figure 1:** Clinical presentation of a pleomorphic salivary adenoma in a 16 year old girl.**Figure 2:** CT scan of pleomorphic adenoma, showing extension into maxilla.

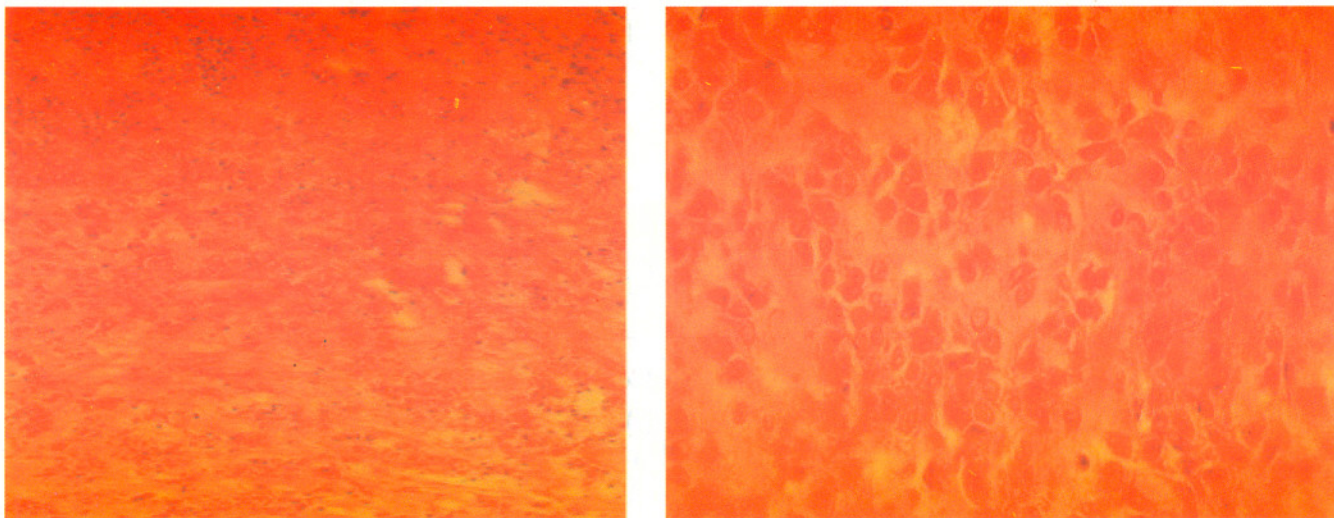


Figure 3. Photomicrographs at low and high power depicting a PSA (H&E: original magnification X100 (left panel) and X400 (right panel).



Figure 4: Post operative photograph of patient depicted in Figure 1.

Discussion

PSA is the most common salivary gland tumour³. Depending on where it manifests, this tumour often poses remarkable challenges related to its accurate diagnosis and the approaches to complete surgical removal⁶. In the oro-naso-pharyngeal sites where lesions may be clinically diagnosed timely, it is our opinion that they are primarily totally extirpated and subjected to histopathological analysis. However, large lesions whose clinical demarcations may be difficult to delineate should require incisional biopsy procedures prior to definitive surgical intervention. Fine needle aspiration (FNA) for cytological analysis may be advocated only in centres where the technique is well established and refined⁵. Indeed, for the very early lesions in the parotid region and the buccal

tissues, FNA cytology is the ideal mode of primary investigation which greatly reduces patient surgical morbidity¹⁰.

Notably, PSA occurring in sites such as the parotid, buccal space and nasopharyngeal areas often have a high recurrence rate. During surgery, therefore, wide resection with adequate margins of grossly normal surrounding tissue but with the preservation of vital structures is advocated. It is important to emphasize that the apparent encapsulation of PSA can be misleading in terms of tumour delineation⁷.

The tendency for PSA to progress to malignancy has traditionally been based on the diagnostic criteria for carcinoma ex PSA (a malignancy developing from a mixed tumour)⁸. PSA recurrence has been attributed to three main factors: spillage at primary operation, inadequate resection or multicentric foci⁴. Occasional metastatic lesions have also been identified in patients with a history of PSA, which, on detailed pathological evaluation, are found to exhibit all the histological hallmarks of the preceding benign lesion⁷. Based on these observations, it is most pertinent that patients who have been treated for PSA are kept under surveillance for as long as it is possible despite the development of marginal excision techniques⁴. Indeed, in the present series, the patient who presented with a giant PSA would require meticulous surveillance. Evidently, from the present and earlier investigations, PSA is an important surgical disease for the oral and maxillofacial pathologists and surgeons¹. This disease shall, therefore, still require audit updates and continued histopathological surveillance.

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