



## Pleomorphic adenoma of the salivary glands: a retrospective study of 40 cases.

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### Abstract

Forty cases of pleomorphic adenoma (PA) presented in this study were diagnosed in the department of the Oral Pathology, College of Dentistry, Baghdad University covering the period 1982-1992. The tumours were distributed according to age, gender and site of occurrence. Patients ranged in age from 11 to 80 years. The age group 41-50 years was most frequently affected by PA 12 cases (30%) followed by 3<sup>rd</sup> and 4<sup>th</sup> decades 9(22.5%) 7(17.5%), respectively. It is evident in this study that PA was more frequently seen in females 24 (60%) than males 16 (40%). It was observed from results that the palate was the most common site for occurrence of PA 32(80%), followed by the parotid gland 3(7.5%). Most of the results were comparable to the data of the literatures.

**Key words: Pleomorphic adenoma. Salivary gland tumours.**

### Introduction

Pleomorphic adenoma (PA) is the most common benign salivary gland tumour. The term pleomorphic referred to the wide variation in parenchymal and stromal differentiation shown by the tumour cell <sup>(1)</sup>. PA accounts for about 60-65% of all tumours of parotid gland, and for about 45% of all tumours of minor salivary glands <sup>(2)</sup>.

PA is nearly encountered in patients of all ages but the majority of patients are in the third to fifth decades of life, and there is a preponderance of female <sup>(1,3-7)</sup>.

Although PA is most commonly occurred in parotid gland but can affect the submandibular, lingual and minor salivary glands as well <sup>(4-10)</sup>.

PA arises mainly from duct epithelium or myoepithelial cells. The tumour shows a great variety of

histological appearance with complex intermingling of epithelial components and mesenchymal like areas like ducts, sheets or strands of dark staining epithelial cells, squamous metaplasia and foci of keratin, fibrous and elastic tissue, myxoid tissue and cartilage (1,2,11).

PA is benign tumour with a slow and continuous growth that without treatment can reach very large size. Ademar et al. have reported a case of a giant PA of the parotid gland measured 28 cm and weight 4 kg (12). Other studies have reported a weight range between 1 – 27 kg (13).

Magnetic resonance imaging (MRI) is a reliable diagnostic approach to determining the extent of the disease, particularly in the major salivary glands and the treatment of PA is

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usually excised with a margin of surrounding normal tissue to avoid uni- or multifocal recurrence(1). Recurrent PAs are prone to new recurrences, especially when multinodular and treated with a local excision. Surgical treatment should include facial nerve resection in selected cases of PA of the parotid gland(14). Thinning or absence of the pseudocapsule and the presence of fingerlike projections of the tumor have been observed in all histologic subtypes of pleomorphic adenoma, in particular the myxoid type (15). Even though many hypotheses for recurrences of parotid gland pleomorphic adenoma have been advanced, including cell biological and genetic factors (16,17), obvious or underestimated tumor spillage, incomplete excision, and violation of the pseudocapsule of the tumor are considered the only proven reasons contributing to recurrent disease<sup>(18)</sup>.

Metastatic PA of the salivary glands is very infrequent neoplasm. Fernandez et al reported one case of metastatic PA<sup>(19)</sup>, whereas Wenig et al could find 32 case reports in the literature and added 8 new cases to their series for total 9 of 11 cases<sup>(20)</sup>.

## Material and method

Forty cases of PA presented in this study were obtained from the files of the patients registered in the Department of the Oral Pathology, College of Dentistry, Baghdad University covering the period 1982-1992. The clinical features recorded were analyzed statistically according to gender, age and site. The cases were diagnosed by well expert oral pathologist. All specimens diagnosed were stained by Hematoxyline and Eosin stain.

The aim of the present study is to establish a relative frequency and

distribution of pleomorphic adenoma according to gender, age and site.

## Results

In this study it was found that PA was more frequent in age group 41-50 year n:12 (30 %), followed by age group 21-30 year n:9(22 %), whereas it is the least in age group 71-80 year n:1(2.5%) as shown in table I.

Regarding the gender, it was clear (table II) that females were more frequently affected than males 24(60%) 16(40%), respectively. The female/male ratio is 1.5-1.

Table III reveals the distribution of pleomorphic adenoma according to site. It was found that palate was the predominant site for occurring of PA and account for 32(80%) which was more frequent than that of the parotid gland region 3(7.5%), followed by upper lip and buccal mucosa 2(5%) for each one.

## Discussion

This paper studied forty cases of PA reported at the period between 1982-1992. Few cases of unknown age or site were discarded.

PA could occur almost always in all ages. Many authors<sup>(1,3-7)</sup> have found that the majority of patients with PA were in third to fifth decades of life and in females more than males, these findings agree the results of the present study (table I & II ). However, Abiose et al have noticed that PA was occurred more frequently in fourth decade of age with no difference in sex ratio<sup>(10)</sup>. Whereas, Odukoya observed that the males affected by PA slightly more frequent than females<sup>(11)</sup>. In the present study out of 40 cases of PA, 24(60%) occurred in females, with a peak incidence at the third decade of life. Similar studies reported that these lesions predominantly occurred in

females with peak incidence at the third decade of life<sup>(9,21)</sup>.

Although PA of parotid gland is more frequent than of the minor salivary gland but in this study the palatal PA was remarkably seen 32(80%) as shown in table III. This result is comparable to that done in Lagos, Nigeria<sup>(11)</sup> in which PA of palate was seen in nearly 70% of the cases. Other studies have observed results in which palate was the principle site for occurrence of PA which support the present finding<sup>(3,4,7)</sup>.

In contrast other studies<sup>(8,9)</sup> have recorded a higher frequency of occurrence of PA in parotid gland region than that of the minor salivary gland (mainly the palate region).

It seems that series that shows the palate being the most common sites, are more likely studied cases drained to oral surgery and treated by oral surgeons. Whereas in series that found parotid gland being the most common site are more likely studied cases treated in general surgery units by general surgeons. This fact may justifiably explain the site predilection in the palate or in the parotid gland.

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Table I: Distribution of pleomorphic adenoma according to age

Age groups	Number of patients
11---20	4(10%)
21---30	9(22.5%)
31---40	7(17.5%)
41---50	12(30%)
51---60	4(10%)
61---70	3(7.5%)
71---80	1(2.5%)
<b>Total</b>	<b>40(100%)</b>

Table II: Distribution of pleomorphic adenoma according to gender

Age groups	Male	Female	Total
11---20	1(2.5%)	3(7.5%)	4(10%)
21---30	2 (5%)	7(17.5%)	9(22.5%)
31---40	2 (5%)	5(12.5%)	7(17.5%)
41---50	4(10%)	8(20%)	12(30%)
51---60	3(7.5%)	1(2.5%)	4(10%)
61---70	3(7.5%)	0	3(7.5%)
71---80	1(2.5%)	0	1(2.5%)
<b>Total</b>	<b>16(40%)</b>	<b>24(60%)</b>	<b>40(100%)</b>

Table III: Distribution of pleomorphic adenoma according to site

Age groups	Palate	Parotid gland	Upper lip	Buccal mucosa	Submandibular gland
11---20	2(5%)	0	1(2.5%)	0	1(2.5%)
21---30	7(17.5%)	2(5%)	0	0	0
31---40	6(15%)	0	0	1(2.5%)	0
41---50	11(27.5%)	1(2.5%)	0	0	0
51---60	3(7.5%)	0	1(2.5%)	0	0
61---70	2(5%)	0	0	1(2.5%)	0
71---80	1(2.5%)	0	0	0	0
<b>Total</b>	<b>32(80%)</b>	<b>3(7.5%)</b>	<b>2(5%)</b>	<b>2(5%)</b>	<b>1(2.5%)</b>

