



CASE REPORT

A case of giant pleomorphic adenoma of the parotid gland

M.N. de Silva^a, K.M.S. Kosgoda^b, W.M. Tilakaratne^{a,*}, P. Murugadas^c

^a*Department of Oral Pathology, Faculty of Dental Sciences, University of Peradeniya, Peradeniya, Sri Lanka*

^b*Oral and Maxillofacial Unit, General Hospital, Anuradhapura, Sri Lanka*

^c*General Hospital, Ratnapura, Sri Lanka*

Received 6 November 2003; received in revised form 6 November 2003; accepted 22 December 2003

KEYWORDS

Pleomorphic adenoma;
Parotid gland

Summary Pleomorphic adenoma (PA), the most common salivary gland tumour, accounts for a majority of parotid gland neoplasms. Untreated PAs can gradually enlarge in size and weigh several kilograms. We report a case of a giant PA in a 76 year-old male who complained of a large growth on the left side of the face, which enlarged gradually over a period of over 30 years. The excised specimen was 20 cm × 14 cm × 12 cm in dimensions and 3.5 kg in weight.
© 2004 Elsevier Ltd. All rights reserved.

Introduction

A 76 year-old male farmer sought medical attention for a large growth on the left side of the face in February 2001. The painless swelling had gradually increased in size over a period in excess of 30 years. Examination showed the swelling to be related to the left side parotid gland and was oval in shape. The growth measured 20 cm × 30 cm in dimensions and was firm in consistency (Fig. 1). It was attached to the deeper structures, but movable. Venous engorgement was evident but facial nerve palsy was not observed.

The lesion was clinically diagnosed as a benign tumour arising in the parotid gland and fine needle aspiration cytology diagnosed the lesion as a

pleomorphic adenoma (PA). The tumour was subsequently excised under general anaesthesia along with total parotidectomy of the left side parotid gland, with preservation of the facial nerve.

One week post-operatively, significant left side facial nerve weakness was observed. One month post-operatively, the facial nerve weakness had improved 90% and one year post operatively, no facial nerve weakness was observed and no local recurrences were observed. The patient is reviewed annually and has no complications or recurrences thus far.

Macroscopically, the excised specimen was ovoid in shape and 20 cm × 14 cm × 12 cm in dimensions and weighed 3.5 kg.

Microscopically, the tumour was composed of strands and islands of epithelial cells arranged in a myxochondroid stroma. Some areas showed solid sheets of epithelial cells. Ductal differentiation was frequent (Fig. 2). There was no evidence

* Corresponding author. Tel.: +94-81-2387500; fax: +94-81-2388948.

E-mail address: wmtlak@pdn.ac.lk (W.M. Tilakaratne).



Figure 1 Clinical Photograph to show an oval shaped large swelling in relation to the left side parotid gland, 20 cm×30 cm in dimensions and with venous engorgement in a 70-year-old male patient.

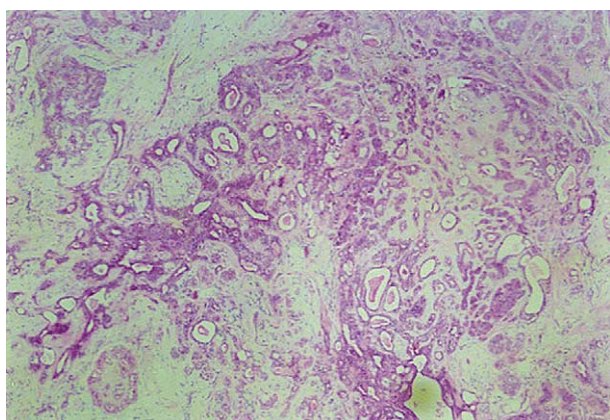


Figure 2 Photomicrograph to show strands and islands of epithelial cells arranged in a myxochondroid stroma with frequent ductal differentiation (haematoxylin and eosin stain×4).

of malignancy and the tumour was diagnosed as a PA.

Discussion

PAs are the most common salivary gland tumours, accounting for 45–74% of all salivary gland tumours.¹ They occur most frequently in the parotid gland¹ and are the most common parotid gland tumours, accounting for a majority of parotid masses² and 65% of all neoplasms arising in the parotid glands.³ They typically present in the lower pole and superficial (lateral) lobe of the parotid gland.¹ Though localization in the deep lobe is rare, approximately 10% of all parotid PAs are thought to originate in the deep lobe of the gland⁴

and can expand intraorally into the para pharyngeal space.¹ The submandibular gland and minor salivary glands, particularly minor salivary glands of the palate, buccal mucosa and upper lip are frequently affected sites as well.¹ PAs usually present as slow growing asymptomatic discrete swellings, which gradually increase in size.¹ The vast majority of these tumours are 2–6 cm in size when resected.² Large tumours often form a single but irregularly nodular mass which stretches the overlying skin or mucosa.¹ The weight of the tumour can vary from several grams to more than 8 kg⁵ and the weight appears to increase with the duration of the tumour. In our case the resected tumour was 20 cm×14 cm×12 cm in dimensions and the weight of the excised specimen was 3.5 kg.

In a review of 31 giant PAs occurring in the parotid gland over a period of 140 years by Schultz-Coulon in 1989, most occurred in females (64.5%) and only 35.5% occurred in males⁶ which is consistent with the gender variation of other salivary gland tumours (except Warthins tumour) and particularly with that of PA.¹ The age of first tumour manifestation varied between 20 and 40 years. However, paediatric patients could also be affected.⁷ Our patient was a 76-year-old male who had noticed the gradually enlarging swelling for a period of more than 30 years. The weight of the giant tumours reviewed by Schultz-Coulon varied between 1–26.5 kg.⁶ The PA in our patient was at the lower end of this scale.

Malignant changes can occur in PA and include three distinct pathologic entities: Carcinoma arising in PA, carcinosarcoma and benign metastasizing PA.¹ Development of secondary carcinoma in PA in preexisting PA is 3–4% according to the literature.⁸ Malignant changes were found in only 10% ($n = 3$) of the giant PA cases reviewed by Schultz-Coulon.⁶ The incidence of malignancy frequently shows a correlation between the length of the history of PA and the development of a carcinoma.⁸ It has been reported that the risk of development of malignancy is only about 1.5% up to 5 years but increases to 9.5% after more than 15 years.⁹ The usual presenting symptom of carcinoma arising in PA is a slowly growing mass which has been present for a long time, with the average duration of 23 years.¹⁰ However, in other series, 45% of carcinomas arising in PAs were present for less than 3 years. In the series reported by Spiro et al, some tumours had been present for 2 years or less.¹¹ Generally, malignant transformation can be suspected with a sudden change in growth and local signs of malignancy including pain, ulceration, spontaneous bleeding, and superficial and deep tissue invasion.¹⁰ Furthermore, multiple recurrences and the

size of the tumour may play a role in the malignant transformation of PA. The clinical characteristics of malignant transformation have been reported in the literature as (1) a long history of PA, (2) advanced age, (3) location in a major salivary gland and (4) history of rapid growth associated with pain or ulceration.¹² Our patient had all the above clinical characteristics of malignant transformation, except a history of rapid growth associated with pain. However, histopathology showed no evidence of malignant changes.

In conclusion, untreated PAs can enlarge gradually up to several kilograms in weight. These giant PAs are more common in females and may enlarge over a period of several decades. Some of these long standing tumours show malignant changes. Therefore, early diagnosis and treatment of PA is essential.

References

1. Ellis GL, Auclair PL. Atlas of tumor pathology. Tumors of the salivary glands. Washington, DC: Armed Forces Institute of Pathology; 1995. pp. 39–41.
2. Buenting JE, Smith TL, Holmes DK. Giant pleomorphic adenoma of the parotid gland: case report and review of the literature. *Ear Nose Throat J* 1998;**77**(8):643, 637–8, 640.
3. Speight PM, Barrett AW. Salivary gland tumours. *Oral Dis* 2002;**8**(5):229–40.
4. Morita N, Miyata K, Sakamoto T, Wada T. Pleomorphic adenoma in the parapharyngeal space: report of three cases. *J Oral Maxillofac Surg* 1995;**53**(5):605–10.
5. Guerriere CN, Goff JJ, Cummings GH, Auber AE. An unusually large, solid tumor of the parotid gland. *Ann Plast Surg* 1999;**43**(5):529–32.
6. Schultz-Coulon HJ. Pleomorphic giant adenomas of the parotid gland. *Laryngorhinootologie* 1989;**68**(8):445–9.
7. Uslu SS, Inal E, Ataoglu O, Sezer C. Pleomorphic adenoma of an unusual size in the deep lobe of the parotid gland. *Int J Pediatr Otorhinolaryngol* 1995;**33**(2):163–9.
8. Mizui T, Ishimaru J-I, Miyamoto K, Toida M. Malignant transformation of a gigantic pleomorphic adenoma of the submandibular gland: a case report. *J Oral Maxillofac Surg* 2000;**58**:1422–4.
9. Thackray AC, Lucas RB. Atlas of Tumor Pathology. Tumors of the major salivary glands. Washington DC: Armed Forces Institute of Pathology; 1974. p. 37.
10. Boneu F, Gonzalez-Lagunas J, Huguet P, Bassas C. Massive malignant pleomorphic adenoma of the palate. *J Oral Maxillofac Surg* 1998;**56**:91–6.
11. Spiro RH, Huvos AG, Strong EW. Malignant mixed tumor of salivary origin: a clinicopathologic study of 146 cases. *Cancer* 1977;**39**(2):388–96.
12. Yamamoto Y. Clinical signs and histology of carcinoma in pleomorphic adenoma. *Otologia* 1994;**87**:1320–4.

Available online at www.sciencedirect.com

