

A Case of Large Pleomorphic Adenoma of Parotid Gland

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ÖZET

Parotis bezinde büyük pleomorfik adenom olgusu

Amaçlar: Az rastlanır büyük bir parotis pleomorfik adenom vakası. Gereç ve Yöntem: Ümraniye Eğitim ve Araştırma Hastanesinde takip edilip ameliyat edilen parotiste büyük pleomorfik adenomlu olgunun literatür verileriyle değerlendirilmesi.

Bulgular: 66 yaşında erkek hastanın yüz sol yanında 15 yıllık süreçte fazlaca büyüme gösteren kitle şikayeti mevcut; 7 cm x 7 cm x 6cm boyutlarında ve 650gr. ağırlığında speysmen eksize edildi.

Sonuçlar: En sık karşılaşılan tükürük bezi tümörü olan pleomorfik adenom, özellikle parotis neoplazmalarının önemli bir kısmını oluşturur. Tedavi edilmeyen pleomorfik adenomlar büyük boyutlar ve ağırlıklarla karşımıza çıkabilir.

Anahtar kelimeler: Pleomorfik adenom; parotis bezi; büyük

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ABSTRACT

A case of large pleomorphic adenoma of parotid gland

Objectives: We report a rare case of large pleomorphic adenoma **Study Design and Methods:** A case of large pleomorphic adenoma which was followed in Ümraniye State Hospital for Research and Training and discussed with the knowledge of literature.

Results: We report a case of a giant PA in a 66 year-old male who complained of a large growth on the left side of the face, which enlarged gradually over a period of over 15 years. The excised specimen was 7 cm x 7 cm x 6 cm in dimensions and 650 gr. in weight.

Conclusions: Pleomorphic adenoma, 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.

Key words: Pleomorphic adenoma; Parotid gland; large

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INTRODUCTION

Salivary gland neoplasms can occur at any site where salivary tissue is found. Pleomorphic adenoma or benign mixed tumor is the most common salivary tumor, accounting for up to two-thirds of all salivary gland neoplasms (1). PAs are the most common salivary gland tumours, accounting for 45–74% of all salivary gland tumours (2). They occur most frequently in the parotid gland (2) and are the most common parotid gland tumours, accounting for a majority of parotid masses (3) and 65% of all

neoplasms arising in the parotid glands (4). Within the parotid gland, the majority of pleomorphic adenomas arise in the superficial lobe. Adequate surgical therapy involves nerve identification and protection with removal of the tumor and an adequate cuff of surrounding parotid gland parenchyma. A complete superficial parotidectomy has been recognized for years as the standard procedure in dealing with parotid gland neoplasms (5). Though localization in the deep lobe is rare, approximately 10% of all parotid PAs is thought to originate in the deep lobe of the gland (6) and can expand intraorally into the para pharyngeal space (2). 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 (2). Approximately 85% of all pleomorphic adenomas are located in the parotid glands, 10% in the minor salivary glands, and 5% in the submandibular glands (7).

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CASE REPORT

A 66-year-old man, presented with a painless big tumor arising from the right parotis which had been slowly enlarging over a period of 15 years (figure 1), referred to outpatient clinic in september 2008.. The patient never complained of any symptoms. He lived in a small mountainous village and appearance was not an issue to him. Examination showed the swelling to be related to the right side parotid gland and was oval in shape. The growth measured 7 cm x 7 cm x 6cm in dimensions and was firm in consistency. There was no evidence of tumor spread beyond the parotid gland and no cervical lymph nodes palpable It was



Figure 1: Clinical Photograph to show a large swelling in relation to the right side parotid gland with 7 cm x 7 cm x 6cm in dimensions and venous engorgement in a 66-year-old male patient.



Figure 2: Computerised tomography scan of right large parotid mass

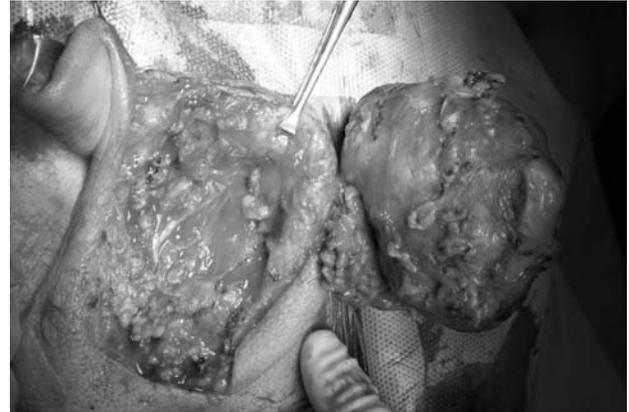


Figure 3: The tumour was excised with superficial parotidectomy of the right side parotid gland, with preservation of the facial nerve.

attached to the deeper structures, but movable. Venous engorgement was evident (Figure 1) but facial nerve palsy was not observed.

The lesion was clinically diagnosed as a benign tumour arising in the parotid gland which was also scanned with computerised tomography (Figure 2) and fine needle aspiration cytology diagnosed the lesion as a pleomorphic adenoma (PA). The tumour was subsequently excised under general anaesthesia along with superficial parotidectomy of the right side parotid gland, with preservation of the facial nerve (Figure 3) In the post-operative the aesthetic and functional results were excellent.

Macroscopically, the excised specimen was ovoid in shape and 7 cm x 7 cm x 6 cm in dimensions and weighed 650 gr. (Figure 3). 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. There was no evidence of malignancy and the tumour was diagnosed as a PA.

DISCUSSION

Pleomorphic adenomas contain both mesenchymal and epithelial cells. Grossly, the tumors appear encapsulated but, on close inspection, have pseudopod extensions into the surrounding tissues. This growth pattern is thought to be responsible for

the high rate of local recurrence (approximately 30%) when these tumors are enucleated (8). PAs usually present as slow growing asymptomatic discrete swellings, which gradually increase in size (2). The vast majority of these tumours are 2–6 cm in size when resected (3). Large tumours often form a single but irregularly nodular mass which stretches the overlying skin or mucosa (2). The weight of the tumour can vary from several grams to more than 8 kg. (9) and the weight appears to increase with the duration of the tumour. In our case the resected tumour was 7 cm x 7 cm x 6 cm in dimensions and the weight of the excised specimen was 650 gr.

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 males (10) which is consistent with the gender variation of other salivary gland tumours (except Warthins tumour) and particularly with that of PA. (2) The age of first tumour manifestation varied between 20 and 40 years. However, paediatric patients could also be affected (11). Our patient was a 66-year-old male who had noticed the gradually enlarging swelling for a period of more than 15 years. The weight of the giant tumours reviewed by Schultz-Coulon varied between 1–26.5 kg. (10). 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. (2). Development of secondary carcinoma in PA in preexisting PA is 3–4% according to the literature (12). Malignant changes were found in only 10% (n=3) of the giant PA cases reviewed by Schultz-Coulon. (10). The incidence of malignancy frequently shows a correlation between the length of the history of PA and the development of a carcinoma

(12). 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 (13). 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 (14). 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 (15). 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 (14). 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,
- (4) history of rapid growth associated with pain or ulceration (16).

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.

CONCLUSION

Untreated PAs can enlarge gradually up to several kilograms in weight. These big PAs 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. Califano J, Eisele DW. Benign salivary gland neoplasms. *Otolaryngol Clin North Am* 1999;32:861-73.
2. G.L. Ellis and P.L. Auclair, Atlas of tumor pathology. Tumors of the salivary glands. , Armed Forces Institute of Pathology, Washington, DC (1995) pp. 39-41 .
3. J.E. Buenting, T.L. Smith and D.K. Holmes, Giant pleomorphic adenoma of the parotid gland: case report and review of the literature. *Ear. Nose Throat J.* 77 8 (1998), p. 643 637–8, 640.
4. P.M. Speight and A.W. Barrett, Salivary gland tumours. *Oral Dis.* 8 5 (2002), pp. 229–240
5. William R. Carroll, MD, C. Elliott Morgan, Diseases of the Salivary Glands. In: Ballenger's Otorhinolaryngology Head and Neck Surgery 16th ed. BC Decker Ontario 2003 pp 14441-1454.
6. N. Morita, K. Miyata, T. Sakamoto and T. Wada, Pleomorphic adenoma in the parapharyngeal space: report of three cases. *J. Oral Maxillofac. Surg.* 53 5 (1995), pp. 605-610.
7. Luna MA. Salivary glands. In: Pilch BZ, editor. Head and neck surgical pathology. Philadelphia: Lippincott Williams & Wilkins; 2001. p. 284-349.
8. Larry J. Shemen. Salivary glands: Benign and malignant disease. In: K.J. Lee Essential otolaryngology 7th ed. Appleton & Lange Connecticut 2003 pp 499-526.
9. C.N. Guerriere, J.J. Goff, G.H. Cummings and A.E. Auber, An unusually large, solid tumor of the parotid gland. *Ann. Plast. Surg.* 43 5 (1999), pp. 529-532.
10. H.J. Schultz-Coulon, Pleomorphic giant adenomas of the parotid gland. *Laryngorhinotologie* 68 8 (1989), pp. 445-449.
11. S.S. Uslu, E. Inal, O. Ataoglu and C. Sezer, Pleomorphic adenoma of an unusual size in the deep lobe of the parotid gland. *Int. J. Pediatr. Otorhinolaryngol.* 33 2 (1995), pp. 163-169.
12. T. Mizui, J.-I. Ishimaru, K. Miyamoto and M. Toida, Malignant transformation of a gigantic pleomorphic adenoma of the submandibular gland: a case report. *J. Oral Maxillofac. Surg.* 58 (2000), pp. 1422-1424.
13. A.C. Thackray and R.B. Lucas, Atlas of Tumor Pathology. Tumors of the major salivary glands. , Armed Forces Institute of Pathology, Washington DC (1974) p. 37 .
14. F. Boneu, J. Gonzalez-Lagunas, P. Huguet and C. Bassas, Massive malignant pleomorphic adenoma of the palate. *J. Oral Maxillofac. Surg.* 56 (1998), pp. 91-96
15. R.H. Spiro, A.G. Huvos and E.W. Strong, Malignant mixed tumor of salivary origin: a clinicopathologic study of 146 cases. *Cancer* 39 2 (1977), pp. 388-396
16. Y. Yamamoto, Clinical signs and histology of carcinoma in pleomorphic adenoma. *Otologia* 87 (1994), pp. 1320-1324.