

CASE REPORT

Pleomorphic adenoma of parotid gland- A case report

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Introduction

Salivary gland tumors are rare and make up about 3% of all neoplasms of the head and neck.¹ Pleomorphic adenoma is the most common salivary gland neoplasm, accounting for 70% of all parotid gland tumours and approximately 85% are benign; of these, 80% are pleomorphic adenoma.² These tumours are almost uniformly characterized by a slow-growing, painless mass, usually varying from 2 to 6 cm in diameter when resected. In 4% of cases, tumours may be malignant.³

Most tumours originate in the superficial lobe but, more rarely, these tumours may involve the deep lobe of the parotid gland.⁴ It is generally considered to be a benign tumour, even if this lesion presents several histological features due to the different compounds with a myxoid or condroid matrix. Right side involvement is more common than left side and female to male ratio is 2:1. Its occurrence is rare in children and young adults and is found more commonly between fourth to sixth decades of life .The main characteristics are the high recurrence rate and not infrequent malignant conversion. Symptoms are usually rare or not significant; in fact, in most cases, the only sign is asymptomatic swelling, that slowly grows in the parotid region without involving the facial nerve, the function of which remains unchanged. It most commonly presents in the middle age and is most common in women.⁵

Carcinomatous transformation within a benign mixed tumour in which the initial benign elements are still identifiable is termed as Carcinoma Ex Pleomorphic Adenoma (CXPA). Often, onset of a facial nerve deficit, changes in consistency, more rapid growth as well as pain are signs of malignant transformation. A rare complication is the malignant conversion followed by distant metastasis. Although local lymphatic spread is most common means by which these tumours metastasize, hematological distant metastasis have been reported to occur.⁶

The histological variety of this tumour along with the particular location, increase the difficulty in selecting

Abstract

Salivary gland tumors are rare, comprising less than 3% of all neoplasia of head and neck region. Pleomorphic adenoma is the most common type of all salivary gland tumors. It exhibits wide cyto-morphologic and architectural diversity and that is how it is considered to mixed tumor. Due to few symptoms and extension into a hidden site, the tumor can grow for a long time before being diagnosed, and the potential risk for malignant transformation increases over the years with the incidence of 1-7%. Hereby, we report a case of pleomorphic adenoma in a 46 year-old male who complained of a large growth on the left side of the face, which enlarged gradually over a period of over 10 years. Advanced imaging modality was used to determine the exact location and extent of the tumor so as to carry out its complete resection for a favourable outcome.

the best surgical approach to maximize visibility, ensure complete removal of the tumour, and reduce morbidity.⁷

Herewith, a case of parotid gland pleomorphic adenoma is presented. A review has which focuses on the diagnosis, the surgical approach and any complementary treatment.

Case report

A 46 year old male reported with a complaint of swelling on the left side of his face since last ten years. The swelling was asymptomatic but was associated with slight reduction in the mouth opening since past 1 month. The medical and past dental history was non-contributory. On careful clinical examination, a solitary oval well defined swelling measuring 4 x 5 cm in size was seen on the left side of the face extending tragus of the left ear to angle of the mandible (Fig. 1, 2). No sinus or discharge of pus or bleeding was seen. There was also slight reduction in the mouth opening.

Swelling was well circumscribed, superficial, firm in consistency, mobile and was not attached to the skin. Overlying skin was normal in colour and texture. Orthopantomograph showed no significant findings. A clinical diagnosis of pleomorphic adenoma was considered along with differential diagnosis of and Warthin's tumor in view of its location. Computed Tomography scan was performed to evaluate the extent of the mass. Computed Tomography scan showed a well-defined encapsulated homogeneously hypodense soft tissue swelling of size 3.3 cm (Mediolateral) x 5.6 cm (Anteroposterior) x 4.4 cm (Superior-inferior) seen in the superficial lobe of parotid gland in the anteroinferior part of the left parotid gland extending more anteriorly. The deep lobe of the parotid gland and the major vessels appeared normal (Fig 3). The main hypothesis for diagnosis was a benign tumour of the parotid gland, most likely pleomorphic adenoma.

The tumour was excised under general anaesthesia and a mass of approximate dimensions of 5cm x 4cm x 2cm was obtained. The post-operative course was uneventful. On gross examination it was found to be firm in consistency and have smooth to irregular surface (Fig 4). Histopathologically, it showed epithelial tumor cells arranged in the form of sheets and duct like pattern surrounded by fibrous capsule. The duct like spaces contained eosinophilic coagulum. The connective tissue stroma showed vessels and areas of haemorrhage (Fig 5). This confirmed the diagnosis of pleomorphic adenoma of the parotid gland.



Figure 1: Gross asymmetry seen due to swelling on the left side of face



Figure 2: Swelling involving the left pre auricular region



Figure 3: Axial CT image CT showing well defined encapsulated homogeneously hypodense soft tissue swelling

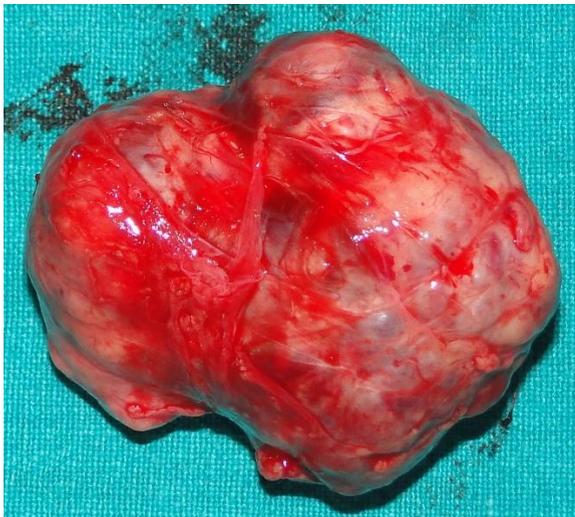


Figure 4: Gross specimen of tumour when excised.

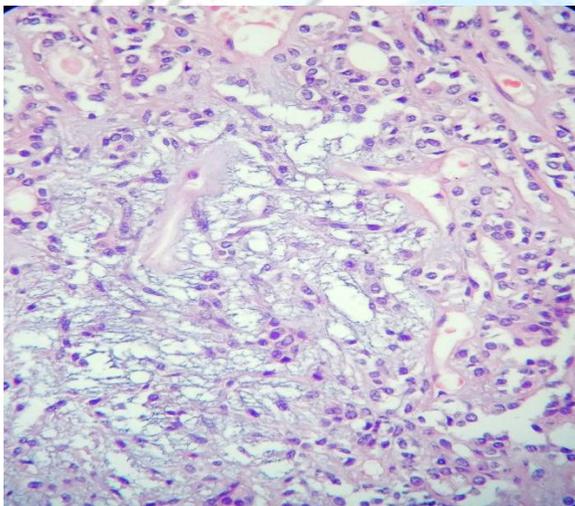


Figure 5: Hematoxylin and eosin stained histopathological picture of pleomorphic adenoma

Discussion

Pleomorphic adenoma is the most common salivary gland tumour. The main site of occurrence is the parotid gland, affecting patients of any age, most frequently between the fourth and sixth decades of life.⁸ It is mostly located at the superficial lobe of the parotid gland. The incidence of malignant transformation in adenomas ranges from 1.9% to 23.3%. The risk increases in tumours with long-standing evolution, recurrence, advanced age of the patient and location in a major salivary gland.⁹ Some authors postulated that the risk of malignant transformation increases from 1.6% in tumours with less than 5 years of evolution, to 9.5% for those presenting for more than 15 years.¹⁰ Pleomorphic adenoma presents clinically as a solitary, painless, slow-growing, well-circumscribed parotid or pre-auricular lump. Its size at presentation varies considerably and depends on the duration of lesion. It is usually encapsulated when it arises in the major

salivary glands, but not in the minor salivary glands. Cells of epithelial origin give rise to ductal structures and are closely intermingled with mesenchymal elements that may give rise to myxoid, hyaline, cartilaginous, and osseous change.¹¹ The firmness of pleomorphic adenoma varies with the nature and amount of stromal component. So it ranges from soft in case of more mucinous tumors to hard tumors with extensive collagenous or chondroid component.

Diagnostic imaging, such as Computed Tomography (CT) or Magnetic Resonance Imaging (MRI), are mandatory, on account of its better definition of soft tissue, and provides precise information concerning tumour margins as well as the relationship with the surrounding structures.

The most widely used surgical procedure for the excision of a superficial lobe benign parotid tumour is nowadays represented by superficial parotidectomy which is referred to as the most widely used technique by the International Literature. Other inappropriate surgical treatments, such as enucleation, are strongly associated with higher tumour recurrence rate.

Conclusion

Pleomorphic adenoma is referred as a benign locally invasive pseudo-capsulated slowly-growing tumor. It is supposed to have pseudopodia infiltrating the surrounding glandular tissue that might increase the risk of recurrence in case of inappropriate surgical treatment. Although it is generally accepted that the majority of all adenomas remain non-malignant, this case and others like it should serve to remind us that the clinical course of these masses can be far from benign. We believe that prompt diagnosis and early excision of parotid pleomorphic adenoma is desirable.

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