



AN UNUSUAL PRESENTATION OF PLEOMORPHIC ADENOMA IN ANTERIOR MANDIBLE : A CASE REPORT

Dental Science

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ABSTRACT

Salivary glands tumors represents about 3- 10% of all the tumors of the head and neck region. The most commonly involved salivary gland tumor is pleomorphic adenoma and its potential to undergo malignant transformation is also well known. The hard palate is the most common intraoral site followed by upper lip. PAs involving uncommon site has also been reported. Here we are reporting an unusual occurrence of a pleomorphic adenoma affecting the anterior mandible.

KEYWORDS

Pleomorphic adenoma, malignant transformation, anterior mandible, salivary gland tumour.

INTRODUCTION:

Salivary gland tumors constitute a major area of concern and dilemma in the field of oral and maxillofacial surgery practice considering the unusual behavior of the tumor. Salivary gland tumors constitute 3-6.5% of all head and neck neoplasms. 90% of benign neoplasms in the salivary gland, mostly pleomorphic adenoma are associated with the parotid gland and less frequently the minor and accessory salivary glands. It also described as "mixed tumor, salivary gland type", which describes its pleomorphic appearance.²⁻⁴

Pleomorphic adenomas may occur at any age, most commonly diagnosed in patients between the ages of 30 and 50 years although uncommon in the first two decades of life but have been reported with a slight female predilection.¹ It ranks as the most common salivary gland neoplasm in children, representing 66-90% of all salivary gland tumors. Its etiology is unclear. The risk of the PAs becoming malignant described in the literature ranges from less than 10% to as much as 40%.

Pleomorphic adenoma tumors are usually painless, slow growing, firm mass, well-delineated, covered with normal mucous membrane and the tumor is usually surrounded by a fibrous capsule of varying thickness with a clear demarcation between the tumor and the adjacent salivary tissue in those occurring in major salivary glands whereas the fibrous capsule is not very apparent but the tumor is clearly demarcated from the surrounding tissues in those occurring in minor salivary glands.⁵

Wide local excision with removal of periosteum and involved bone with preservation of local neurological structure is the treatment of choice. Here we report an unusual presentation of a case of pleomorphic adenoma in a young male patient in anterior mandible.

CASE REPORT :

A 28-year-old male patient reported to our unit with a chief complaint of swelling of lower front tooth region since 5 months [Figure 1]. He was apparently well 5 months back when he noticed an asymptomatic swelling on his lower anterior mandible region. The swelling developed gradually over a period of time, increasing in size and attained the present size. It was not associated with pain, fever, loss of weight, loss of appetite. Past medical history did not reveal anything significant. Past dental history revealed he went to a hospital where

doctor performed incisional biopsy, the diagnosis of which came as pleomorphic adenoma. He was advised by the doctor to undergo surgical excision but he did not undergo surgery. His family and personal and family history was not significant. His swelling over a period of time increased in size but not associated with pain. There was no symptom suggestive of facial nerve involvement or any signs of xerostomia or difficulty in swallowing. He then reported to our centre 5 months later after advice of another person who got treated in our center for some disease.

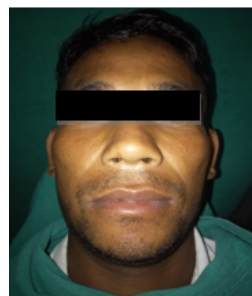


Figure 1: Facial profile

General physical examination revealed that the patient was moderately built and nourished, conscious and cooperative. All vital are in normal limits, no signs of anemia, jaundice or lymphadenopathy were observed on examination.

On extraoral examination, diffuse swelling was seen on the chin region. On palpation, swelling was firm, lobulated, non-tender with well-defined margins, non palpable lymph node and was not attached to underlying structures. Skin over the swelling was normal in appearance and temperature over the swelling was also normal.

On intraoral examination swelling is seen on the anterior region of the mandible extending superoinferiorly from the occlusal surface and gingival margin of mesial of left canine to distal of right canine to vestibule depth, obliterating the vestibule covering half the tooth and anterioposteriorly from mesial of left canine to distal of canine extending interdental measuring 2 * 2cm buccally and 2.5 * 2cm lingually. Swelling is firm, lobulated and non tender with well defined

margins.[Figure 2,3].



Figure 2: Intra oral picture (Buccal view)



Figure 3: Intra oral picture (Lingual view)

On the basis of history, clinical examination and previous histopathological report a diagnosis of pleomorphic adenoma was done. Radiological investigations done was OPG and CT Face with 3D Reconstruction.

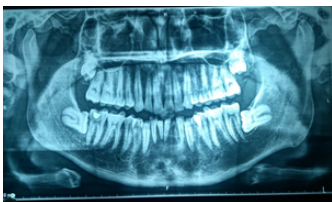


Figure 4: Panoramic view

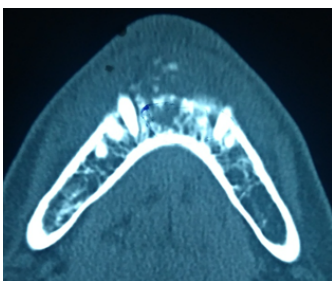


Figure 5- axial section showing perforation of buccal cortical plate and extending in to Surroundings of tissue



Figure 6- coronal section showing expansion of buccal and lingual plate.

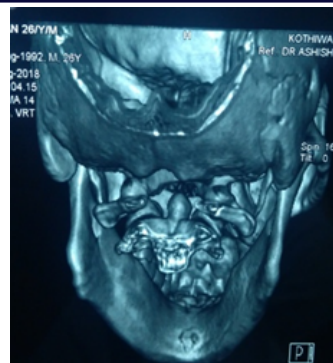


Figure 7- 3d reconstruction showing perforation in lingual cortex.

Based on the reports the case was planned for surgical excision/resection of the involved region under general anesthesia and reconstruction at a later period . The panoramic films did not reveal anything significant except slight resorption of the tooth involved in the region.[Figure 4]. Axial and coronal views, as well as 3D reconstruction of computed tomography (CT) scan, revealed perforation of lingual bony plates of the mandible and with evidence of perforation on the buccal plate, extending into the soft tissues as well as expansion of both lingual and buccal plate [Figure 5, 6,7].

DISCUSSION

Pleomorphic adenoma is the most common benign salivary gland tumor. PA is most commonly seen in the parotid gland, i.e., 85% and 8% occur in submandibular gland followed by 6.5% of cases in minor salivary glands and 0.5% in sublingual gland, most commonly diagnosed in the 4th to 6th decade of life with a slight female predilection (1.43:1).¹ Mostly the tumor is asymptomatic in nature and ranges from 0.8 cm to 5.0 cm in size. Our patient was a 28 year-old male patient with a diffuse, non-tender, multi lobulated nodule which slowly increased in size and attained the present Size .The typical pleomorphic adenoma is commonly seen below the lobule of the ear and overlying the angle of the mandible, but in the present case it was found on the anterior portion of mandible which is very rare, and also present over a longer period can raise suspicious of change from benign characteristics. When the tumor occurs in the parotid gland, symptoms related to the facial nerve weakness are seen in large longstanding tumors. PA are benign tumors with a well-documented transformation to malignancy (carcinoma ex pleomorphic adenoma and metastasizing benign mixed tumor). The incidence to undergo malignant transformation described in the literature ranges from less than 10% to as much as 40% .Therefore, early definitive treatment is strongly recommended.¹⁰

Different imaging modalities such as ultrasound (US), FNAC, magnetic resonance imaging (MRI) and CT can be used to assess salivary gland disease. The choice of imaging modality depends on the local protocol, clinical features and the site of suspected pathology. However, only biopsy can give histological certainty of tumor nature and prevents long-term malignant transformation.⁷

Presently ,CT is one of the primary imaging modalities used to assess tumors of the salivary glands as was done in the reported case. It allows detection of lesions and assessment of their extension and characteristics as well as their relationships to nearby structures.⁸

The differential diagnosis for this case include Warthon's tumor as both these tumors present with similar clinical presentation but diagnosis would be confirmed after histopathology examination. Other differential diagnosis includemyoepitheliomas, mucoepidermoid and adenoid cystic carcinoma.⁹

Treatment of pleomorphic adenoma is complete surgical excision/ resection with preservation of local neurological structures wherever its location in the head and neck. Recurrence of pleomorphic adenoma following surgery was recorded in 0.5-10%, in some reports rising to 48%.⁹ The tumor has to be excised in its entirety with an adequate margin to avoid recurrences, because the pleomorphic adenomas are enclosed by a layer of fibrous tissue usually termed as capsule which might be very thin and the tumor buds may extend from it.. According to literature 25% of untreated PAs undergo malignant transformation.¹⁰

The exact cause of recurrence in pleomorphic adenoma is controversial, intraoperative tumor spillage is believed to be the main cause of local recurrence but several studies have suggested that incomplete initial resection to be the primary cause. Early definitive treatment is always best choice.

CONCLUSION

Salivary gland tumors should be dissected due to the possibility of becoming malignant. Wide excision with negative margins is the optimal strategy for the management of pleomorphic adenomas. Histopathological biopsy should be routinely taken after the excision of the neoplastic lesion. Adequate surgical excision corresponds with lower risk of recurrence. A key to diagnose PA emphasizes on the prior clinical knowledge of the clinical features and investigations. **In this case the histopathological diagnosis after surgery was pleomorphic adenoma ex carcinoma insitu.** The change from benign to malignant characteristics in this case might be due to the long standing time gap between initial incisional biopsy and final surgical excision. We as dental/ oral surgeon play an important role in early diagnosis and timely management of the case to prevent the risk of malignant changes associated with the pathology.

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