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Pleomorphic Adenoma of Hard Palate, A Case Report

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Abstract

Pleomorphic adenoma (PA) is considered the most common tumor of minor and major salivary glands. While the parotid gland is the commonest site for extra-oral PA, the palate is the commonest site for intra-oral PA. In this article we present a 38-year-old patient with palatal PA, which was treated successfully by wide surgical excision and followed up without recurrence.

Keywords: Pleomorphic adenoma; Palate; surgical excision

Introduction

Pleomorphic adenoma was first named by Willis [1]. According to WHO (World Health Organization), Pleomorphic adenoma is defined as tumor which is localized and presents pleomorphic or mixed characteristic of epithelial origin which is interwoven with mucoid tissue, myxoid tissue, and chondroid masses. It was also referred to as mixed tumor, enclavoma, branchioma, endothelioma, etc. [2] Pleomorphic adenoma is the most prevalent salivary gland tumor, accounting for as much as two thirds of all salivary gland tumors [1]. It mostly affects the parotid gland, less frequently minor salivary glands accounting for 10- 15 % [3]. The palate is the most frequent intra-oral site (42.8-68.8 %) [4]. PA can arise at any age, even in newborn [5]. However, the majority of minor salivary glands PAs occur in the second decade of life [6], with a female predilection [7].

Case Report

A 38-year-old Saudi female was referred to our Oral and Maxillofacial Surgery Department at King Fahad Hospital- Hofuf / KSA for assessment and management of painless left palatal mass which was gradually increasing in size over past months. Patient denied any medical illness. Extra-oral examination of the patient did not show any facial deformity or regional lymphadenopathy. Intra-oral examination showed firm non-tender dome shaped mass of left hard palate with smooth overlaying mucosa, the mass did not cross the midline and extending from upper left first premolar to upper left second molar tooth. Dental examination revealed remaining roots of upper left second premolar, missing teeth 16 & 26 (Figure 1). Radiographical investigations including orthopantomogram and magnetic resonance image (MRI) of head and neck (Figure 2 & 3) were done. MRI showed exophytic well defined lobulated mass of left posterior side of hard palate measuring 19 X 18 X 15mm in anteroposterior, transverse and craniocaudal dimensions respectively with minor upward indenting the floor of the nasal cavity and partially left maxillary sinus

Incisional biopsy of the lesion was performed under local anesthesia, followed by the histologic examination which revealed benign mixed tumor, with surrounding attenuated and thin fibrous pseudocapsule, composed of sheets and occasionally-dilated ductal structures, focally anastomosing cords and strands of epithelial cells, focally forming microcysts and occasionally filled by eosinophilic secretions, with focal anastomosing cords and strands of epithelial cells, focally featuring mild nuclear pleomorphism, with focal aggregates of hyaline plasmacytoid myoepithelial cells, embedded in hyaline fibromyxoid to focal chondromyxoid stroma with focal stranqulated myoepithelial cells, along with occasional solid squamous nests. The morphologic features are consistent with pleomorphic adenoma of salivary

gland. Preoperative investigations including blood investigations and plan for surgical excision under general anesthesia were done. Nasotracheal intubation was done. The extra-oral skin was prepared using povidone-iodine solution. Local anesthesia with 1:80,000 adrenaline was infiltrated around the mass to reduce bleeding intra-operatively. Wide excision of the mass including the periosteum was done with curettage of the underlying bone. Haemostasis was achieved using electrocautery and palatal acrylic stent. Excised mass was sent for histopathologic examination revealed negative margins for tumor.

Figure1: Intra-oral view shows firm mass opposing upper left premolars and molars without crossing the midline.

Figure 2: Orthopantomogram (OPG) views shows filled, endodontically treated teeth, remaining roots of tooth 24 and multiple missing upper and lower teeth.

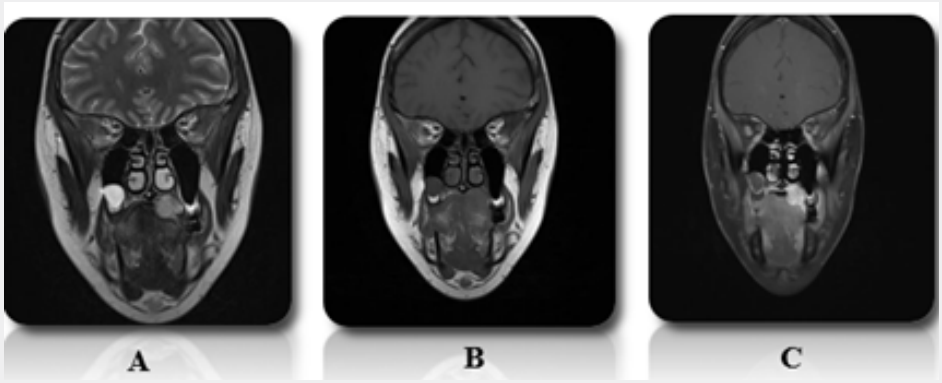

Figure 3: Coronal (A) T2 weighted and (B) T1 weighted MR images demonstrate a well-defined lesion along the left hard palate that hyperintense on T2 and isointense to muscle on T1, mild smooth remodeling of bone adjacent to lesion.
Coronal(C) T1 weight image fat -suppressed contrast enhanced MR image shows intense enhancement of the lesion.

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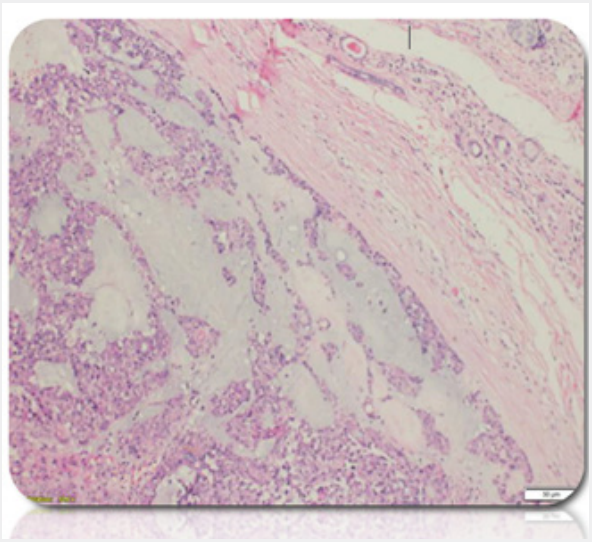

Figure 4: 10 X 1 shows circumscribed benign mixed tumor with pseudocapsule, composed of sheets, occasionally dilated ductal structures, anastomosing cords and strands of epithelial cells embedded in fibromyxoid stroma.

Discussion

The majority of minor salivary gland tumors are malignant, with only 18% benign. PA is the most widespread of the benign tumors [8]. The palatal area is the most common location for this tumor (approximately 73%) [9], followed by the upper lip (17%), buccal mucosa, and floor of the mouth [10]. Typically, a pleomorphic adenoma appears a symptomless, slowly growing mass with a firm consistency [11]. The etiology of pleomorphic adenoma is unknown, although the radiation may play an important rule [12]. The differential diagnosis included in our case are palatal abscess, odontogenic and non-odontogenic cysts, soft tissue tumors such as fibroma, lipoma, and lymphoma as well as other salivary gland tumors [13]. It is impossible to roll out malignant tumors without histopathology [14]. A computed tomography scan and MRI can provide accurate information on the tumor's location and size, as well as its extension to adjacent superficial and deep structures [15]. The pleomorphic adenoma of the hard palate is treated by wide local excision along with the removal of periosteum or bone, if involved. Wide local excision means taking out the tumor and a cuff of healthy tissue around it because the tumor doesn't have a well-defined capsule and has pseudopods [16]. Pleomorphic adenoma recurs at a rate of 6% [17], with the majority of recurrences arising from insufficient surgical procedures such as simple enucleation, capsular penetration, and tumor rupture [18]. Although malignant transformation is rare, it has been reported in 5 % of cases [19].

Conclusion

Minor salivary gland pleomorphic adenoma is a benign, slow growing, painless tumor, but early detection and treatment can prevent consequences like mastication and speech difficulties. Recurrence is rare and usually associated with simple excision technique.

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