PLEOMORPHIC ADENOMA OF HARD PALATE: A CASE REPORT

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Abstract:
Pleomorphic adenoma is a benign tumour, that affects both the major and minor salivary glands. It commonly involves the parotid of the major and palate of the minor salivary glands. It presents as a painless swelling, slowly increasing in size and is encapsulated. This article presents a case of pleomorphic adenoma of palatal minor salivary gland which was surgically excised and wound was protected with medicated surgical template to aid in healing. A follow-up of 6 months did not reveal recurrence.

Keywords: Minor salivary gland, benign palatal tumour, pleomorphic adenoma, adenoma.

INTRODUCTION:
Salivary gland neoplasm represents less than 1% of all tumours[1]. Pleomorphic adenoma is a benign salivary gland neoplasm that constitutes 3-10% of neoplasm in head and neck region[1]. It occurs predominantly in parotid gland, however intraorally it commonly occurs in the posterolateral surface of hard palate (42.63%) followed by labial mucosa (10%), buccal mucosa (5.5%)[2], floor of mouth and tongue. It is also known as mixed tumour as it consists of cells giving rise to epithelial, myoepithelial and mesenchymal components arranged variably and constitutes the histologically complex nature of the lesion. Surgical excision of the tumour is the only treatment modality.

CASE REPORT:
A 23-year-old female patient, reported to the Department of Dental/ Oral and Maxillofacial Surgery, Government Royapettah Hospital, Chennai with the complaint of a swelling in her upper back tooth region.

Detailed history revealed that the swelling was painless and gradually increasing in size over a period of 2 years to attain the present size. There were no other symptoms such as stridor, dysphagia, speech and masticatory difficulties due to the lesion. There were no secondary changes present.
Extraoral examination showed no facial asymmetry or lymphadenopathy. On intraoral examination, an ovoid shaped swelling of 3cm width and 3 cm length was found in the right posterolateral surface of the hard palate. The swelling on palpation was unilocular, non-tender, firm in consistency, immovable, with well-defined margin[Fig 1]. The mucosa over the lesion was stretched and non-pinchable and no secondary ulcerations were present. Bilaterally, the lymph nodes were neither palpable nor tender. Intraoral hard tissue examination revealed no anomalies of the teeth in relation to the lesion.

A Fine Needle Aspiration Cytology (FNAC) was performed which ruled out malignancy also exhibited scant cellularity showing few epithelial acini with nodular enlargement and inflammatory cells. Computed Tomography (CT) revealed a soft tissue mass with endosteal scalloping and no involvement of adjacent osseous structures[Fig 2]. Thus, with the investigations showing no apparent malignant changes or bony infiltration, the lesion was planned for excisional biopsy. An immediate surgical obturator was planned in order to protect the surgical wound post-operatively from infection, limit post-operative swelling, avoid nasogastric feeding and prevent any dehiscence in the view of the fact that no soft tissue graft was planned as the size of the lesion was minimal. Accordingly, pre-operative alginate impression was taken and cast was poured using two pour technique to seal off the lesion site. Final cast was obtained after removal of the area of lesion. A surgical obturator was fabricated in the refined cast.
In sterile conditions under general anaesthesia, the lesion was excised surgically [Fig 3]. No residual extracapsular projections, which could lead to recurrence, was left out. The excised lesion was sent for histopathological examination. The defect was sutured and the pre-fabricated obturator with antiseptic dressing of chlorhexidine acetate 0.5% in white soft paraffin BP (BACTIGRAS Tulle Gras; Smith & Nephew, Canada) was inserted [Fig 4]. Postoperative biopsy showed spindle shaped myoepithelial cells with surrounding glandular structures and duct-like structures filled with eosinophilic coagulum in a hyalinised stromal background which was suggestive of pleomorphic adenoma, confirming the preoperative diagnosis [Fig 5]. The wound was periodically evaluated until complete healing. The patient was monitored continuously and did not show any signs of recurrence at her follow-up visit after 6 months [Fig 6].

DISCUSSION:

In this article, the differential diagnosis of palatal abscess, inflammatory cyst, adenoma, fibroma, lipoma, mucoepidermoid carcinoma, adenoid cystic carcinoma, polymorphous low grade carcinoma, neuroura, neurofibroma, were considered after the clinical examination [5,6,7,9,13]. Palatal abscess was ruled out as there were neither pus discharge from the swelling nor hard tissue abnormalities in relation to the lesion. Conditions of malignancy was ruled out by FNAC. Hence, FNAC and CT had narrowed down the diagnostic possibilities to either an adenoma or a chronic inflammatory cyst. The tumour was finally diagnosed as pleomorphic adenoma through excisional biopsy.

Pleomorphic adenoma constitutes 60% of all salivary gland neoplasms [3]. The term pleomorphic was coined due to the histologic complex patterns of the tumour. It is also known as a mixed tumour [5]. It occurs commonly in major salivary glands notably in the parotid gland. Introral tumours compose 10-25% of pleomorphic adenoma cases [8]. Common introral sites of occurrence are posterolateral surface of the hard palate followed by labial mucosa, buccal mucosa, floor of the mouth and tongue [9]. Introral PA occurs in middle aged adults from 40-60 years of age but can affect persons of any age group [5]. It has a female predilection with male to female ratio of 1:2 [10]. The tumour presents itself as an ovoid shaped painless swelling gradually increasing in size with firm consistency and well defined margins [9]. Palatal tumours are immobile due to the underlying thick mucoperiosteum whereas the tumours in other sites are mobile. Introral tumours are usually diagnosed and treated early as it presents functional disturbances to the patient. Any signs of ulceration on the mucosa without any history of trauma should be suspected for malignancy [5,9].

Preoperative investigations serve as a key to treatment plan in these cases. FNAC is used to differentiate between a benign and malignant tumour [9,13]. 3D Imaging modalities like CT and MRI is used to detect the extent and depth of the lesion, involvement of adjacent osseous structures and perineural invasion to determine the extent of surgical excision [9,11,12]. Adequate surgical excision with extracapsular excision is the only choice of treatment [5,14]. Resection of palatal bone is done in case of bony involvement [10,12]. The defect is sutured and closed. Haemostasis should be achieved. The excised lesion is sent for histopathological examination to confirm the pre-treatment diagnosis. Though the recurrence rate is significantly low, incomplete excision or enucleation, seeding of the lesion, rupture of capsule could lead to recurrence of this tumour [5,10,12-13].

Histologically the tumour consists of epithelial, myoepithelial and mesenchymal components arranged in a complex pattern [5,11,14]. The epithelial cells arranged in sheets and nests of cells give rise to glandular, ductal structures filled with eosinophilic coagulum [11]. Squamous metaplasia and keratin pearls are also present [5,10,11,14]. Myoepithelial cells are a decisive feature of pleomorphic adenoma. Plasmacytoid myoepithelial cells is an exclusive feature of minor salivary gland tumour [11,15]. Spindle cells, Clear cells, Oxyphilic cells may also be present [5,11,14]. The mesenchymal component give rise to chondroid, myxoid and osseous areas [11,14]. The salivary gland parenchyma undergoes fibrosis giving rise to a false capsule [5,14].

FIGURES

Fig. 1- Clinical picture of the palatal swelling

Fig. 2- CT images depicting the extent of the lesion and no erosion of bony structures

Fig. 3- Surgical image of the site of the lesion after it was excised

Fig. 4- Obturator inserted to prompt wound healing
CONCLUSION:
In cases of pleomorphic adenoma, apart from an early clinical detection, the use of efficient and reliable imaging modalities like CT, MRI to view the extent of lesion and its relation to the surrounding structures, and histopathological aids like FNAC and biopsy to differentiate the nature of the lesion, provides the key to an optimum treatment planning and its long term effects.

REFERENCES