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Original Research Paper

Oncology

A RARE CASE OF GIANT CELL TUMOUR OF HARD PALATE

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ABSTRACT Giant cell tumour is a benign tumor with propensity to metastasize to lungs and is rarely seen in head and neck region accounting for around 2% of all GCTs. Thus duty the rarity of the entity, we are presenting a case report of a 34 year old female with GCT of hard palate which was removed transorally.

KEYWORDS : Giant cell tumor, hard palate, bone.

INTRODUCTION

The Giant cell tumor (GCT) has benign histology however it is locally aggressive and can metastasize to lungs.[1] It accounts for around 2% of all GCTs in head and neck region.[2]

It mainly involves sphenoid, ethmoid and temporal bones in craniofacial skeleton and rarely involves the maxilla.[3] It has a female predilection and seen in 20-40 years of age group.[4]

Surgical excision with or without postoperative radiotherapy is the treatment of choice. We will present a case of GCT of hard palate.

Case Report

A 34 year old female presented in the outpatient department of head and neck oncology, Kidwai cancer hospital with complaints of swelling on the hard palate for last 3 months. It was insidious in onset and progressive in nature.

The patient had history of nasal obstruction and intermittent episodes of bleeding from nose. There was no history of loosening of teeth, weight loss, loss of appetite, cervical lymphadenopathy.

On intraoral examination, there was a swelling in thehard on both sides pinkish red in colour, firm and nontender, pushing the soft plate anteriorly. Tumor does not bleeds on touch. The gingivo buccal sulcus was not involved. Externally on face, there was no swelling or fullness.

Diagnosis nasal endoscopy reveals pinkish mass arising from floor of the nose, completely obstructing the choana on both sides and bleeds on touch.

CT scan showed a 5.7*3.3*4.2 cm lesion in nasal cavity arising from the floor of nose, occluding the posterior choana. The lesion is going into bilateral maxillary sinuses and sphenoid sinuses as shown in figure 1 & 2.

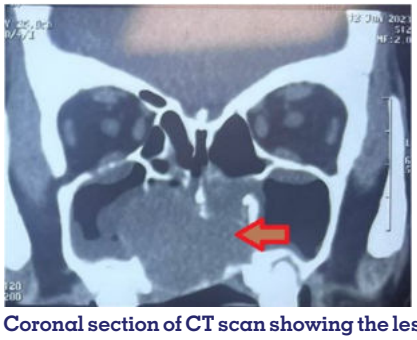

Figure 1: Coronal section of CT scan showing the lesion

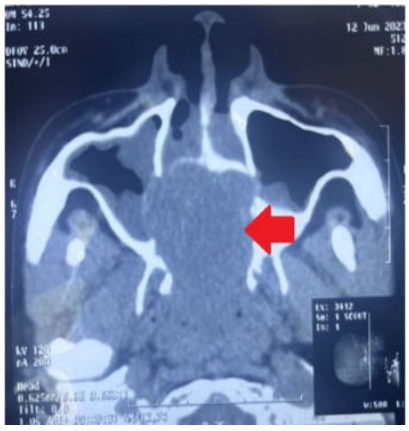

Figure 2: Axial section of CT scan showing the lesion

After getting routine investigation and primary fitness done, patient was planned for intraoral excision under general anaesthesia. After giving incision at the alveolar margin, palatal mucosal flap was elevated from the tumor. Lesion was found to involve the soft palate, hard palate and part of nasopharynx and it was removed. Nasal cavity was packed with bismuth iodo-paraffin phosphate pack and defect was closed primarily as shown in figure 3.

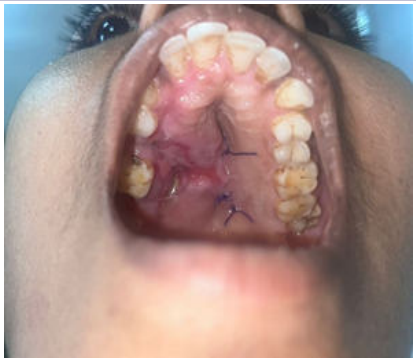

Figure 3: Showing intra oral primary closure of defect

Final histopathology report showed multiple fragments of lesional tissue lined by ciliated columnar epithelium and partly by squamous epithelium. Subepithelium shows highly cellular neoplasm compared of large number of non neoplastic multinucleated osteoclast like giant cells intermixed with mononuclear neoplastic stromal cells. These mononuclear cells are round to oval, with pale eosinophilic cytoplasm, nucleus with vesicular chromatin and few with prominent nucleoli. These features were suggestive of giant cell rich neoplasm as shown in figure 4.

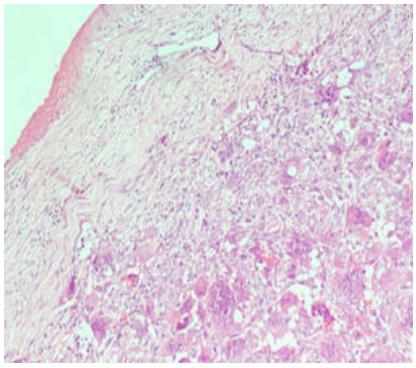

Figure 4: Showing final histopathology showing ciliated columnar epithelium and partly by squamous epithelium with multinucleated osteoclast like giant cells intermixed with mononuclear neoplastic stromal cells

Nasal pack was removed on post operative day 5. Patient was able to swallow without any complaint of nasal regurgitation and there was no oronasal communication.

DISCUSSION

Giant cell tumour is a uncommon tumor of metaphyseo-epiphyseal junction of long bones. Risk of malignancy is 2% and mainly seen in post radiotherapy patients of primary GCT tumor. It is rare in head and neck region accounting for less than 2% of the GCT and majority of literature about the tumor is case reports.[5]

GCT is most commonly seen in young females between 20-40 years of age. Most common presenting symptom is pain. If the maxilla is involved by the tumor then loosening of teeth, epistaxis and neurological deficits are the associated symptoms. In the current case report, 34 year old female patient presented with swelling in the palate and associated with epistaxis. GCT is associated with Von Recklinghausen's disease, Francescatti syndrome and Paget's disease however, no such condition was seen in the patient.[6]

Various theories have been postulated to understand the pathogenesis of GCT among which Hillerup and Hjorting-Hansen is the most widely accepted according to which GCT, Central Giant Cell (CGCG) and traumatic bone cyst are different stages of same spectrum. Minute trauma or presence of an unidentified small aneurysmal enlargements may result in intramedullary bleeding leading to hematoma. If the blood supply is lost then traumatic bone cyst develops, if small or low pressure vessels are present it forms CGCG and if circulation is maintained creating high pressure vessels ten it forms GCT.[7]

Both CT or MRI can be done however, MRI is used to see the soft tissue extent. GCT is characterised by multilocular expansile lesion showing multiple fluid levels or soft tissue density mass with expansion of the bone with intact bone cortex.[6]

Histopathological features shows multinucleated giant cells in a vascular stroma of epithelioid or spindle shaped mononuclear cells, with peripheral osteoid formation. The Giant cells are uniformly dispersed with an increased number of nuclei and tend to aggregate centrally with areas of necrosis. In the current case also giant cells were present intermixed with mononuclear neoplastic stromal cells, however areas of necrosis were not seen.[8]

Surgery is the mainstay of the treatment for GCT depending on the location of the tumor. The recommended treatment is curettage or enbloc resection with replacement with allograft or biocompatible material.[2] In the present case report author did complete excision of the tumor followed by primary closure of the palatal defect. Recurrence is more common in curettage 34% as compared to enbloc excision 7%.[9] Radiotherapy has also been tried and is reserved for cases which are difficult to treat such as spine and base of skull. More recently bisphosphonates like zolendronate and humanized monoclonal antibodies like Denosumab have been tried and currently they are in trial phases.[10]

CONCLUSION

Giant cell tumor of head and neck is a rare entity with malignant potential and high chances of recurrence. Thus, the case was reported to contribute to the sparsely available data on the topic.

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Statement of Ethics:
This study protocol was reviewed and approved by [Institutional Ethics Committee, ABVIMS and Dr. RML Hospital, New Delhi, India, approval number 275(48/2018)/ IEC/PGIMER/RMLH. Written informed consent was obtained from participants to participate in the study.

Conflicts of Interest Statement:
The authors have no conflicts of interest to declare.

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All data generated or analysed during this study are included in this article. Further enquiries can be directed to the corresponding author.

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