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CASE REPORT

Peripheral Giant Cell Granuloma

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ABSTRACT

The peripheral giant cell granuloma (PGCG), also known as osteoclastoma, giant cell reparative granuloma, giant cell epulis or giant cell hyperplasia, is a relatively frequent reactive benign exophytic lesion of the oral cavity originating from the periosteum or periodontal membrane following local irritation or chronic trauma. PGCG manifests as a red-purple nodule consisting of multinucleated giant cells in a background of mononuclear stromal cells and extravasated red blood cells located in the region of the gums or edentulous alveolar margins, fundamentally in the lower jaw. The lesion can develop at any age, though it is more common between the fifth and sixth decades of life, and shows a slight female predilection. PGCG is a soft tissue lesion that very rarely affects the underlying bone, though the latter may suffer superficial erosion. Here, we present a case of PGCG who presented with the chief complaint of nasal blockade with a palatal mass.

Keywords: Peripheral giant cell granuloma, Giant cells.

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INTRODUCTION

Peripheral giant cell granuloma (PGCG) is the most common oral giant cell lesion as a soft tissue extraosseous purplish-red nodule consisting of multinucleated giant cells in a background of mononuclear stromal cells and extravasated red blood cells. This lesion is probably not present a true neoplasm but rather may be a reactive in nature. The PGCG bears a close microscopic resemblance to the central giant cell granuloma, and some pathologists believe that it may represent a soft tissue counterpart of the central bony lesion.

CASE REPORT

A 35-year-old female presented in the department of otorhinolaryngology at our institution with the chief complaint of right side nasal blockade with progressively increasing palatal lesion for the last 3.5 years. There was no history of local trauma, dental pain, bleeding from the lesion. On examination a soft to firm, pink to purple, mass of size about 2.5 × 1.5 cm, nontender, involving about posterior half the right side of the hard palate crossing the midline with slight involvement of the soft palate (Fig. 1). Overlying mucosa was found to be intact. On nasal endoscopy, a smooth mass noted in the right nasal cavity eroding the palate and extending around the area of hard palate which was vascular and bleeding on touch. CECT nose and PNS showed well-defined enhancing lesion involving right nasal cavity, hard palate and remodeling the hard palate (Figs 2 to 4) suggestive of slow growing lesion. Biopsy was taken from the center of the lesion and histopathological examination report came out to be peripheral giant cell granuloma (Fig. 5).

Patient readmitted and wide excision of the nasal mass along with palatal extension done (Fig. 6). A wide defect was created in the hard palate following surgery (Fig. 7) which healed up with primary intention. No recurrence is noted at the site of lesion till now.

DISCUSSION

Giant cell granuloma is a rare benign lesion and its incidence in head and neck region is reported to be 0.00011%.[1] The

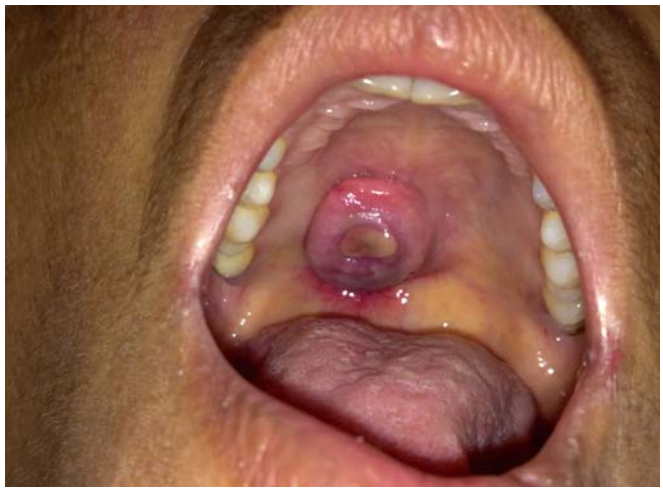

Fig. 1: Ulceroproliferative lesion in the hard palate with induration

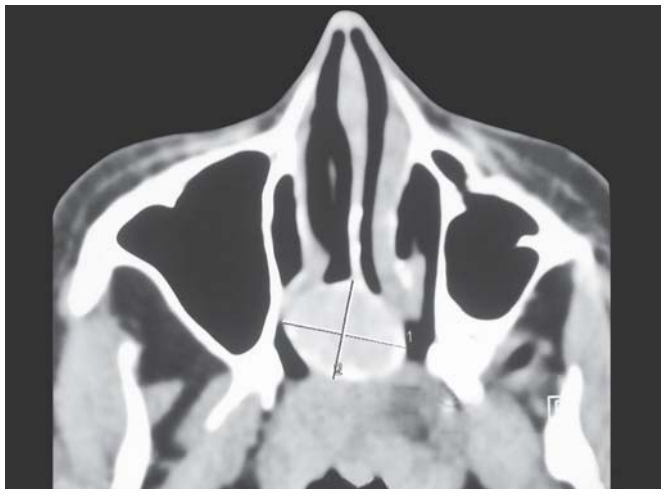

Fig. 2: CECT scan showing a contrast enhancing mass in the nasal cavity

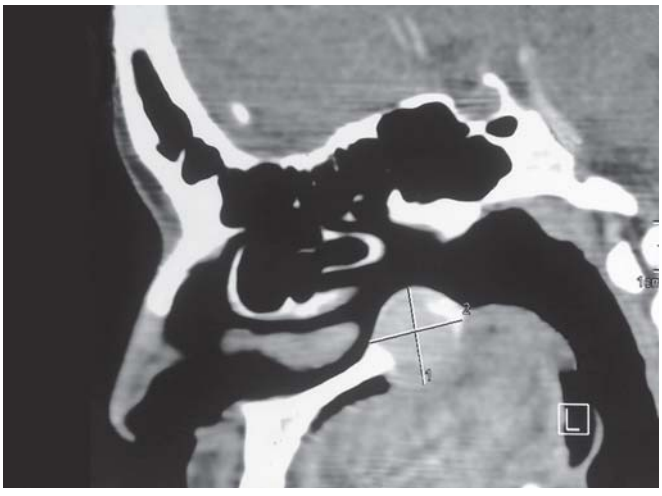

Fig. 3: CECT scan (sagittal cuts) showing destruction of the hard palate

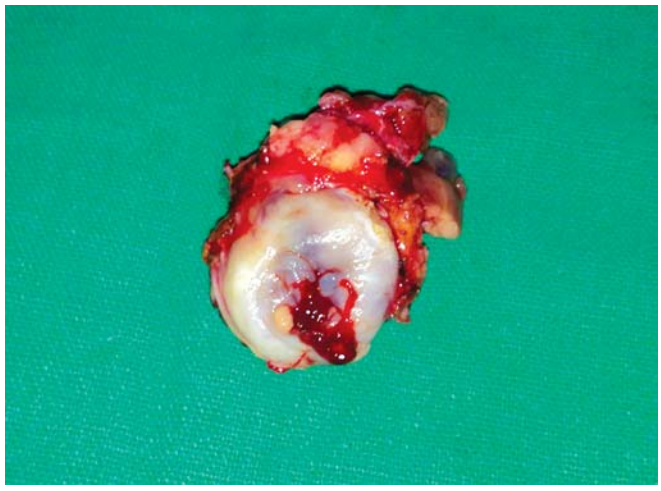

Fig. 6: The excised specimen

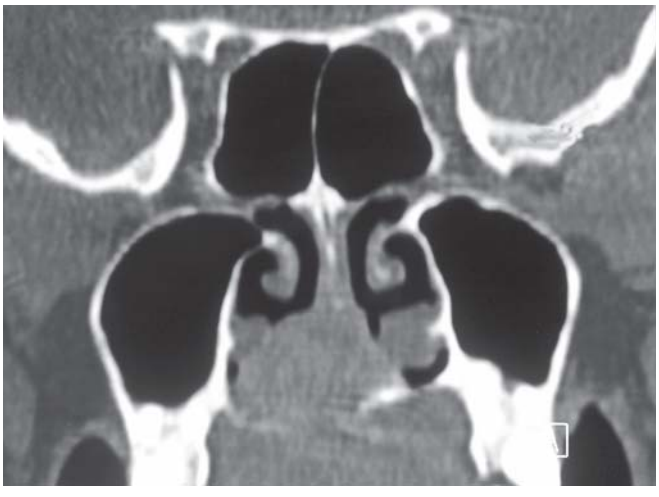

Fig. 4: CT scan showing extension of the disease into the nasal cavity

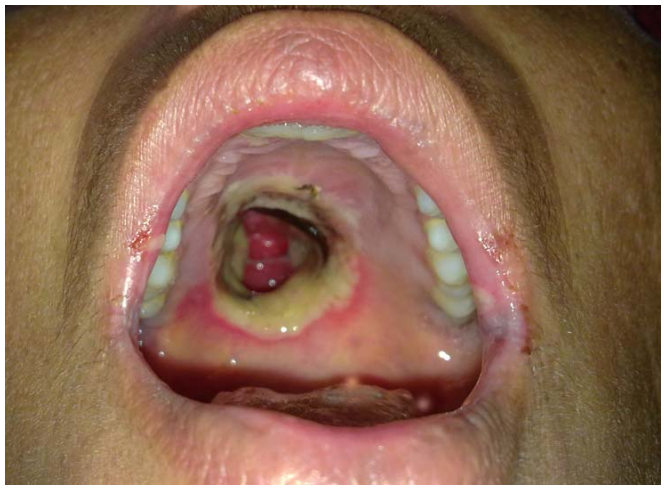

Fig. 7: Postoperative defect

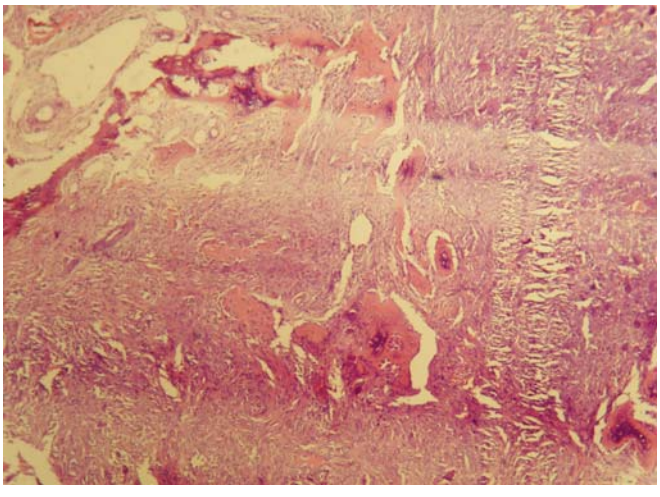

Fig. 5: HPE showing features of peripheral giant cell granuloma

disease can be classified as central giant cell granuloma (CGCG) or (PGCG). CGCG is bone based and usually involves mandible, maxilla, temporal bone and paranasal sinuses. CGCG of hard palate is rare in literature.[2-5] PGCG rarely affects the underlying bone but the later may be involved showing superficial erosions.[6,7]

Spectrum of giant cell lesions is widely distributed, including asymptomatic slow growing lesions to aggressive rapidly growing lesions, characterized by pain and high recurrence potential.[8,9]

The nature and etiology of PGCG is not clear. The multinucleated giant cells were thought to be osteoclasts left from reaction to injury to the periosteum or from physiological resorption to teeth that was proved when these osteoclasts have been found to possess receptor for calcitonin with their ability to excavate bone.

Lim and Gibbins in 1952 found that the multinucleated giant cells reacted strongly for a monoclonal antibody MB1 which has been shown to be expressed by osteoclasts in fetal bone.[10]

Willing et al elaborated that variety of cytokines and differential factors are secreted by stromal cells thus,

stimulating the blood monocyte immigration into the tumor tissue and enhancing the fusion into osteoclast like multinucleated giant cells.[11]

Kfir et al have concluded that the size of the lesion may enlarge from 0.1 to 3 cm and 94% of lesions are smaller than 1.5 cm. Size of the lesion in our case was 2.5 × 1.5 cm.[12]

REFERENCES

1. J de Lange, Van den Akker HP, Klip H. Incidence and disease-free survival after surgical therapy of central giant cell granulomas of the jaw in The Netherlands: 1990-1995. Head Neck 2004;26:792-95.
2. Boedeker CC, Kayser G, Ridder GJ, Maier W, Schipper J. Giant-cell reparative granuloma of the temporal bone: A case report and review of the literature. Ear Nose Throat J 2003;82:926-36.
3. Breuning KH, de Lange J, Perdijk FB. A mistake in the picture processing procedure?, Ned Tijdschr. Tandheelkd 2003; 110:159-60.
4. Hernandez HN, Lewiss RE, Yousem DM, Clerico DM, Weinstein GS. Central giant cell granuloma of the hard palate. Otolaryngol Head Neck Surg 1998;118:871-73.
5. Cannistra C, Fadda T, Guerrieri L, Vero S, Della RC, Iannetti G. Central giant cell granuloma of the palate; unusual localisation in a five-year-old child, Bull Group Int. Rech. Sci Stomatol. Odontol 1999;41:112-14.
6. Ruiz DB, Garcia R, Cuellar NC, Bucci T, Cuesta GM, Vila NG. Reperative giant cell granuloma in a pediatric patient. Med Oral Patol Cir Bucal 2007;12(4):331-35.
7. Avendano CAV Aytes BL, Escoda CG. Peripheral giant cell granuloma. A report of five case and review of the literature. Med Oral Patol Cir Bucal 2005;10(1):53-57.
8. Greer OR, Mierau WG, Favara EB. Tumors of the head and neck in children, clinicopathologic perspectives. New York: Praeger Scientific 1983.
9. Türker M, Yücetas S. Agiz Dis, Çene Hastaliklari ve Cerrahisi, Atlas Kitapçilik 1997.
10. Lim L, Gibbins JR. Immunohistochemical and structural evidence of a modified microvasculature in the giant cell granuloma of the jaws. Oral Surg Oral Med Oral Pathol 1995; 79:190-98.
11. Willing M, Engels C, Jesse N, Werner M, Delling G, Kaiser E. The nature of giant cell tumor of bone. J Cancer Res Clin Oncol 2001;127:467-74.
12. Kfir Y, Buchner A, Hartsen LS. Reactive lesions of the gingiva: A clinicopathological study of 741 cases. J Periodontol 1980; 51:655-61.

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