

Central Giant Cell Granuloma

Tahereh Nosratzahi,^{*1} Pegah Mosannan-Mozafari,² Hamide Kade,³ Shirin Saravani³

1. Department of Oral Medicine, Dental Research Center, Zahedan University Of Medical Science, Faculty of Dentistry, Zahedan, Iran
2. Department of Oral Medicine, Faculty of Dentistry, Mashhad University of Medical Sciences, Mashhad, Iran
3. Department of Oral Maxillofacial Pathology, Faculty of Dentistry, Zahedan University of Medical Sciences, Zahedan, Iran

Article information	Abstract
Article history: Received: 27 Oct 2011 Accepted: 14 Dec 2011 Available online: 2 Feb 2013 ZJRMS 2014 July; 16(7): 40-41 Keywords: Granuloma Giant cell Reparative giant cell	Central giant cell granuloma, (giant cell reparative granuloma), is a non-neoplastic proliferative lesion with unknown etiology which commonly occurs in the mandible. This lesion presents a wide variety of radiological and clinical manifestations that may lead to misdiagnosis. CGCG is diagnosed through histopathological examinations.

Copyright © 2014 Zahedan University of Medical Sciences. All rights reserved.

Introduction

The central giant cell granuloma (CGCG) was reported by Jaffe for the first time as non neoplastic proliferative lesion [1, 2]. World Health Organization (WHO) defined CGCG as an intra osseous lesion consisting of cellular fibrous tissue containing multiple foci of hemorrhage of multinucleated giant cell occasionally trabeculae of woven bone [3]. The CGCG of the jaws is accounting for fewer than 7% of all benign tumors of the jaws [4].

Case Presentation

A 41-year-old woman had referred to Mashhad Dental School 6 months ago complaining of the swelling of the left side of her face and palate area. The lesion had a gradual growth so that within 6 months it had reached an approximate size of 3×2 cm. Extra-oral examination showed the swelling of the left side of her face. It was seen no paresthesia. Face skin had normal color and touching lymph nodes showed no lymphadenopathy. Intra oral examination showed an exophytic mass as a bucco-lingual expansion on edentulous ridge in the palate area with an approximate size of 3×2 cm which had been extended from the anterior of the left side of maxilla to its posterior area and vestibular depth had been filled. The lesion had a smooth surface and in touch it had rubber strength. The second molar tooth had mobility due to the growth of the lesion. The color of the lesion was pink and it was bleeding when it was incited. The lesion had no systemic signs and no special case had been reported in her and her family medical history and she had no special oral habit (Fig. 1). In the radiographic view, (Fig. 2) a multilocular lesion with soap bubble pattern was seen in left maxillary ridge. The lesion had been widely spread and the opacity of left sinus was apparent. Due to the spread of the lesion into sinus, the initial diagnosis was developed lesions from sinus and the secondary one was ameloblastoma. Ossifying fibroma was one of the items

considered in the differential diagnosis of the lesion. The lesion which is started from inter dental papilla area appears as a piled or no pile mass in the anterior area of maxilla and causes adjacent tooth to move. Its range of age is 10 to 19 and female-male ratio is 3/2. Regarding the location of the lesion which was the anterior of maxilla, the next diagnosis was adenomatoid odontogenic tumor (AOT) which is a non common odontogenic tumor appearing generally in the second decade of life. It is a painless tumor with gradual growth which is associated with the absence tooth. The extra follicle type of AOT was considered in the differential diagnosis of the lesion. Tumoral lesions including vascular tumors like hemangioendothelioma and angiosarcoma were also proposed but the lesions are hardly seen in mouth and they generally appear in old individuals and are more prevalent in the mandible. The lesions are very aggressive and if it was the final diagnosis, it would cause severe bone destruction within 6 months [5]. In histopathology examination, a considerable number of multi-core giant cells were seen in cellular stroma containing round and spindle-shape cells with hemorrhagic focuses. Hemosidrein pigment was observed as well. According to the findings, the lesion was diagnosed central giant cell granuloma (Fig. 3).



Figure 1. Bucco-lingual expansion on edentulous ridge in the palate area

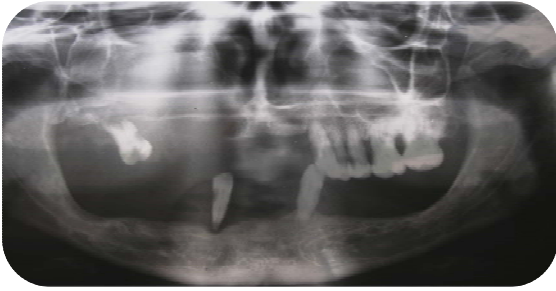


Figure 2. Multilocular lesion with soap bubble pattern in left maxillary ridge

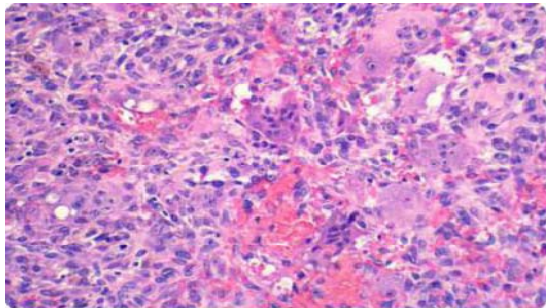


Figure 3. Multi-core giant cells in cellular stroma

Discussion

CGCG is a non neoplastic proliferative lesion with unknown etiology. It is more likely to appear on mandible than maxilla but in the current case, it had been appeared

References

1. Kaffe I, Ardekian L, Taicher S. Radiologic features of central giant cell granuloma of the jaws. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 1996; 81(6): 720-6.
2. DeLange J, Vanden HP. Clinical and radiological features of central giant cell lesions of the jaw. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2005; 99(4): 464-7.
3. Kruse-Losler BR, Diallo C, Gaertner KL. Central giant cell granuloma of the jaws. A clinical radiological and histopathologic study of 26 cases. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2006; 101(3): 346-354.
4. Farrier SL, Farrier JN, Smart MK. A 10-year review of the occurrence and treatment of central giant cell granuloma, in district general hospital. *J Oral Pathol Med* 2006; 35(6): 332-5.
5. Neville B, Damm D, Allen C. *Oral and maxilla facial pathology*. 3th ed. USA: W.B. Saunders Company; 2009: 345-356.
6. Ebrahimi H, Yazdani J, Pourshahidi S. Central giant cell granuloma of the posterior maxilla: A case report. *J Dent Res Dent Clin Dent Prospect* 2009; 2(2): 71.

on maxilla [1, 2]. Ebrahimi et al. reported the CGCG of the posterior of maxilla in a 15 years old girl [6].

Painless swelling with considerable asymmetry is the typical sign of CGCG and in some cases it may be suddenly discovered as an abnormality by a radiology which is done for other reasons. Only in 25% of cases the lesion may be painful [6]. The current case however, was discovered as a painless swelling with asymmetry.

In our case, radiography view was seen as a multilocular lesion with soap bubble pattern. The radiography view is not a pathognomic lesion and it may be conflicted with many of other buccal lesions. CGCG may appear in every age but it is prevalent in adult (<30) [3]. The final diagnosis of the lesion is done through the histopathology of it which includes fibrotic cells tissues, bleeding focuses, big multi-core cells and sometimes osseous trabeculae.

Authors' Contributions

All authors had equal role in design, work, statistical analysis and manuscript writing.

Conflict of Interest

The authors declare no conflict of interest.

Funding/Support

Zahedan University of Medical Sciences.

*Corresponding author at:

Department of Oral Medicine, Faculty of Dentistry, Zahedan University of Medical Sciences, Zahedan, Iran.

E-mail: nosratzahi@yahoo.com