

CASE REPORT

PAINLESS SWELLING OF POSTERIOR MANDIBLE; CENTRAL GIANT CELL GRANULOMA – A CASE REPORT

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ABSTRACT:

Central giant cell granuloma (CGCG) is an intra-osseous lesion consisting of cellular fibrosis tissue containing multiple foci of hemorrhage, multinucleated giant cells and trabecules of woven bone. This lesion accounts for <7% of all benign jaw tumors. It has been reported that this lesion is diagnosed during the first two decades of life in approximately 48% of cases, and 60% of cases are evident before the age of 30. It is considerably more common in the mandible than in the maxilla. Jaffe¹ considered it as a locally reparative reaction of bone, which can be possibly due to either an inflammatory response, hemorrhage or local trauma. Females are affected more frequently than males. In this case we are presenting a case of painless swelling of posterior mandible.

Key words: Giant cell granuloma, Posterior Mandible.

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This article may be cited as: Sharma R, Khande KR, Awasthy D, Singh PP. Painless swelling of posterior mandible; central giant cell granuloma – A Case Report. Int J Res Health Allied Sci 2016;2(4):66-68.

INTRODUCTION

Central giant cell granuloma (CGCG) was first described by Jaffe in 1953. It is an uncommon, benign and proliferative non-neoplastic process. Jaffe considered it as a locally reparative reaction of bone, which can be possibly due to an inflammatory response, hemorrhage or local trauma¹. Females are affected more frequently than males. It occurs over a wide age range.² It has been reported that this lesion is diagnosed during the first two decades of life in approximately 48% of cases, and 60% of cases are evident before the age of 30. It is considerably more common in the mandible than in the maxilla. Most lesions occur in the molar and premolar area, some of these extending up to the ascending ramus. The presence of giant cell granuloma in the mandibular body area, the entire ramus, condyle and coronoid represents a therapeutic challenge for the oral and maxillofacial surgeons³.

The purpose of this case report is to understand the diagnostic challenge that CGCG presents in the dental clinic and to dental surgeons.

CASE REPORT

A 39 -year-old female reported to our Department of Oral medicine ,diagnosis and radiology with a chief complaint of painless swelling on the left back region of lower jaw since 4 months. On examination, a swelling on the left side was revealed on posterior mandibular region, which was firm and painless. The patient had difficulty in speech and chewing and swallowing. Clinical examination revealed large swelling, focal, nontender, with ill-defined margins,

non-fluctuant and non compressible, restricting the mandibular movements. On extra-oral examination, a single, focal, swelling was seen on the left side of the mandible. (Figure 1)

The swelling measured about 3 cm × 3 cm. The surface of the swelling was smooth and extended superiorly below the tragus of the ear and inferiorly below the angle of the mandible, involving submandibular region . The swelling was firm in consistency, showed no secondary changes and was slightly tender on palpation.

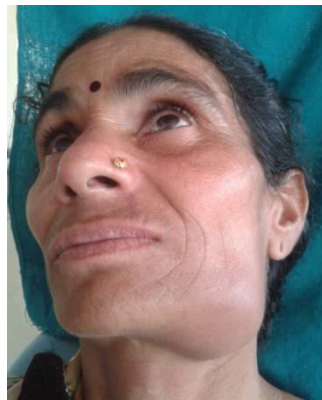


Figure 1- Clinical picture

Radiographically (i.e., Orthopantomogram (OPG) and postero-anterior view of mandible (Figure 2) the lesion was seen as a well-defined, expansile, unilocular radiolucency with varying degrees of expansion of the cortical plates occupying the ramus, angle and coronoid process region. Radiographic appearance of the lesion is not pathognomic and may be confused with that of many other lesions of the jaws.

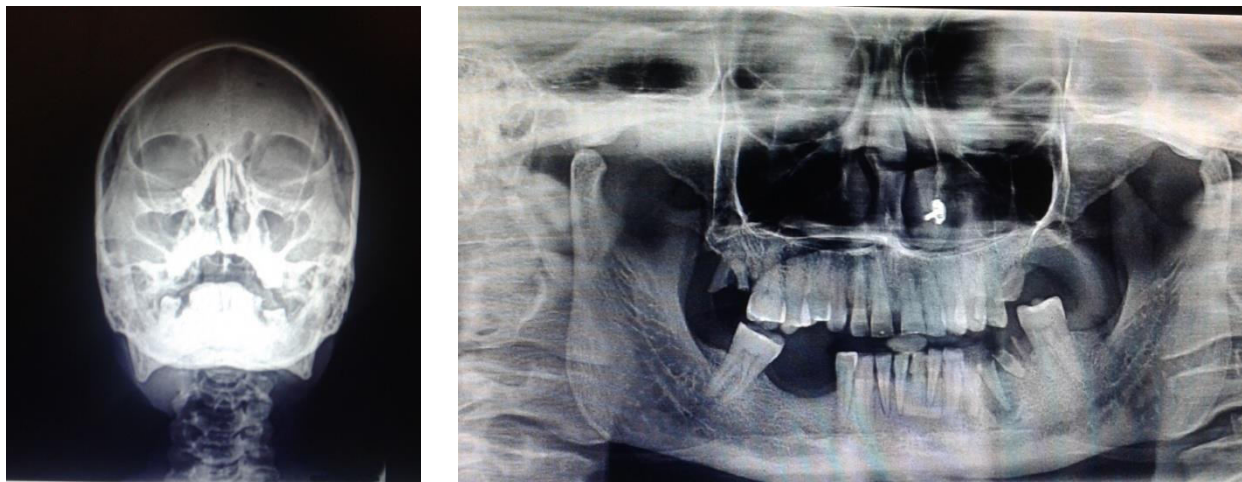


Figure 2- Posterior-anterior view and orthopantomogram

A provisional diagnosis of ameloblastoma, dentigerous cyst, pindborg's tumor, true giant cell lesion, odontogenic keratocyst cyst was made Based on the clinical and radiological examination. Fine-needle aspiration cytology was performed which revealed polymorphic lymphoid cells, focal necrosis and few epitheloid like cells and thus confirmed all the provisional diagnosis to be negative. Further incisional biopsy was performed and report showed connective tissue made up of mature collagen fibres, fibroblasts and showing numerous multinucleate giant cells with foci of osseous structures. On the basis of histopathological and radiological findings, a diagnosis of aggressive Central Giant Cell Granuloma was established.

DISCUSSION

The CGCG appears as a painless expansile mass. The clinical behaviour of the CGCG ranges from a slowly growing asymptomatic swelling to an aggressive lesion causing pain, local bone destruction, root resorption or displacement of the tooth. The lesion has been reported as confined to the tooth bearing area of the jaws, being more common in the anterior portion of the mandibular body.⁴ Aggressive central giant cell lesions have been described as painful, rapidly growing and producing cortical perforation, root resorption.⁵

The mononuclear cells can form osteoclasts like giant cells in vitro by the development of osteolytic lesions. Besides osteoclasts, the mononuclear cells differentiate themselves in macrophages that play a critical in connective tissue during inflammatory and reparative process.⁶

The most widely accepted method of surgical treatment of CGCG is aggressive curettage. Curettage of the tumor mass, followed by the removal of the peripheral bony margins results in a low recurrence rate and good prognosis³.

Another conservative treatment of CGCG is intralesional injection of corticosteroids, calcitonin and

bisphosphonates. It remains somewhat controversial because some surgeons have not been able to duplicate the original success of this method. The use of exogenous calcitonin may have some merit in the treatment of aggressive lesions;⁷ Function of giant cells is inhibited by calcitonin.⁸

In the case, the female patient was conscious about her facial asymmetry due to the painless, gradually increasing swelling on the left side of the mandible. The case presented in this article conforms to the reported site, sex, age and jaw. This lesion usually occurs in patients younger than 30 years, being more common in females than males, and more frequent in the mandible than in the maxilla. The lesion has been reported as confined to the tooth bearing area of the jaws⁵.

The radiologic features of giant cell granuloma have not been clearly defined, the lesion may appear as an either unilocular or multilocular radiolucency with well-defined or ill-defined margins with varying degrees of expansion of the cortical plates. Radiographic appearance of the lesion is not pathognomic and may be confused with that of many other lesions of the jaws.⁹

CONCLUSION

The present case report, describing a central giant cell granuloma of the mandible involving the body ramus and angle region, is rare and can be a diagnostic challenge for both oral medicine diagnosis and radiology and oral and maxillo-facial surgeons.

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Source of support: Nil

Conflict of interest: None declared

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