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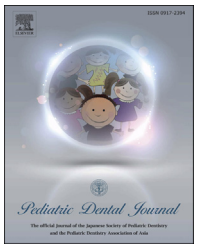

Case Report

Conservative nonsurgical treatment of mandibular central giant cell granuloma in an adolescent: A case report

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ABSTRACT

Giant-cell reparative granuloma (GCRG) is a nonneoplastic osteolytic lesion of unknown origin that may have an aggressive imaging appearance. Although it is a benign disease process, it can be locally destructive as well. Surgery is the traditional and still the most accepted treatment for giant-cell granuloma (GCG). The purpose of this article is to report the clinical case of a 14-year-old girl with a mandibular *central giant cell granuloma* (CGCG), which was favorably treated with intralesional corticosteroid injections and had a 5-year follow-up period.

1. Introduction

Giant-cell reparative granuloma (GCRG) is a nonneoplastic osteolytic lesion of unknown origin that may have an aggressive imaging appearance [1]. GCRG was first described in 1953 by Jaffe as an apparently reactive intraosseous lesion of the mandible and maxilla containing prominent giant cells following trauma-induced intraosseous hemorrhage [2].

The GCRG has been defined by the World Health Organization as an intraosseous lesion consisting of cellular fibrous tissue that contains multiple foci of hemorrhage, aggregations of multinucleated giant cells, and, occasionally, trabeculae of woven bone [3,9].

Central giant cell granuloma (CGCG) is an uncommon lesion accounting for <7% of all benign jaw lesions of the mandible and maxilla in tooth-bearing areas found predominantly in children and young adults with a female predilection

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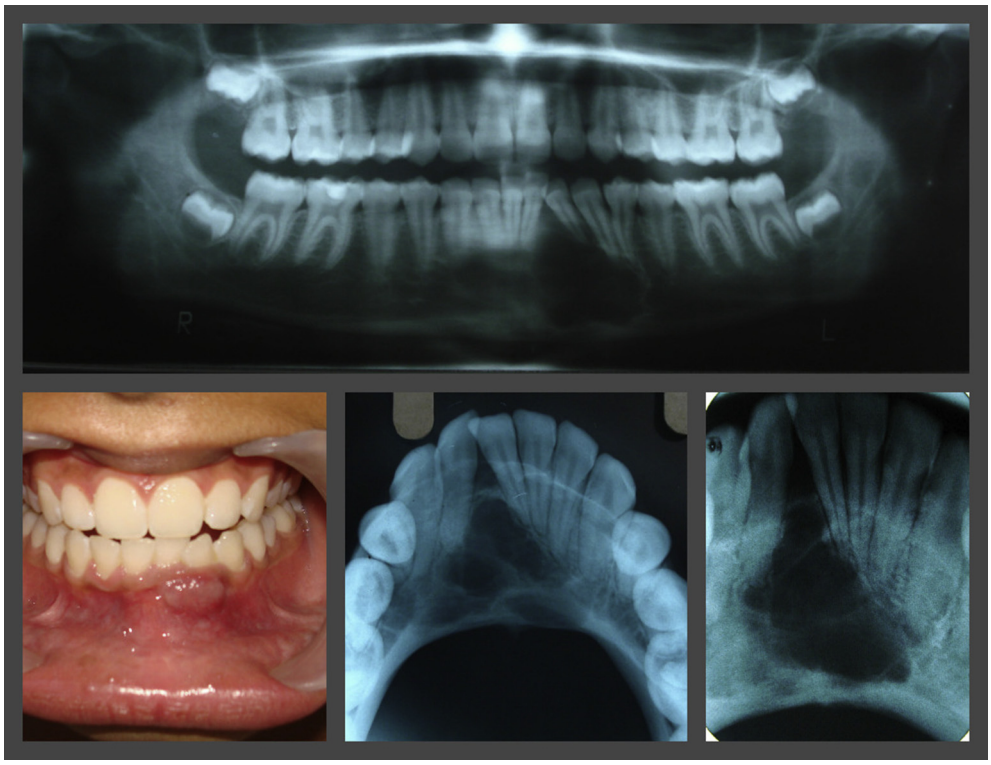

Fig. 1 – Left bottom shows nodular lesion of 1.5 cm diameter found on attached gingival in the anterior mandibular area. Top OPG revealing well-defined multilocular radiolucent area extending inferiorly about 1 cm above the lower border of mandible. Middle bottom shows occlusal view. Right bottom IOPA showing displacement of 32 without root resorption.

of about 2:1 ratio [4,6,10]. The mandible, anterior to the first molar teeth, is the most commonly affected site [3,11]. CGCGs can also affect extragnathic bones, mainly in the craniofacial region, and small, long bones such as those of the hands and feet [5].

The purpose of this article is to report the clinical case of a 14-year-old girl with a mandibular CGCG, which was favorably treated with intralesional corticosteroid injections and had a 5-year follow-up period.

2. Case report

In September 2008, a 14-year-old female patient presented to the Pediatric Department of Guru Nanak Dev Dental College and Research Institute, Sunam, Punjab, India, with a painless swelling in the mandibular incisor area. According to an accompanying adult, the lesion spot had been noticed a year before, which was initially smaller in size but has gradually increased to the present size. The swelling was not associated with any secondary changes like pain, ulceration, draining sinus, or altered sensation (paresthesia). The child was otherwise healthy, but her buccal condition demanded attention. No history of trauma or infection was given by the parents.

Upon intraoral examination, an asymptomatic nodular lesion with a smooth surface of approximately 1.5 cm diameter was found on attached gingival extending mediolaterally from mesial of 31 to distal of 32 and superioinferiorly about 0.5 cm from free marginal gingival extending inferiorly for about 1 cm in the anterior mandibular area (Fig. 1). Mucosal lining over the swelling was apparently normal. On palpation, the swelling was non-tender, firm, and noncompressible. There was no bleeding or pus discharge, on applying digital pressure, from the swelling. All teeth responded positively to the pulp vitality test.

Radiographic examination revealed a well-defined multilocular radiolucent area of margins of approximately 3 cm diameter, extending from 35, crossing the midline to 43, and extending inferiorly about 1 cm above the lower border of mandible. The lesion caused dental displacement of 32 without root resorption and expansion of lingual cortical plate (Fig. 1).

An incisional biopsy was performed through which fragments of a grayish white granulomatous-looking material were collected. Histopathological examination revealed scattered, multinucleated giant cells associated with other mononuclear stromal cells having pleomorphic vesicular nuclei. Since serological exams ruled out hyperparathyroidism, CGCG diagnosis was reached.

Considering the patient's age, the lesion extension, and the eventual facial deformity that could result from conventional surgical procedure, drug therapy was chosen, with the parents' agreement, through the administration of intralesional corticosteroid injection.

Following the protocol outlined by Jacoway et al., local bilateral infiltrate was administered and a 2-ml solution consisting of equal parts of kenacort (triamcinolone actinide, 10 mg/ml) and 2% lignocaine was injected into the lesion using