Case Report

UNUSUAL LOCALIZATION AND ETIOLOGY OF GIANT CELL GRANULOMA

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SUMMARY: The case history of a 36 year old woman is presented who complained of slowly expanding painless tumor formations on anterior portions of both maxilla and mandibula. They were clinically and radiologically diagnosed as two separate central giant cell granulomas (CGCG). Besides their sizes their locations were considered unusual. The patient also had Angle II, Division 2 malocclusion which by causing repeated micro trauma may have contributed to formation of these tumors. Both of which were removed under general anesthesia. Histologic examination confirmed the diagnosis of CGCG with no metastases.

Key Words: Central giant cell granuloma, rare localization.

INTRODUCTION

Central giant cell granuloma (CGCG) is a non-odontogenic tumor of the jaw never seen in the other bones of skeleton. Mandible is the preferred and premolar, molar regions are the most common cites of localization (1, 9). It is interesting to note that few reports exist in the literature where this presumably benign tumor had simultaneously developed at two different location of the same jaw. The case history reported here presented with two giant sized tumors located anteriorly on both jaws.

CASE REPORT

A thirty-six year old woman was referred to Oral Surgery Clinic with a painless, slowly expanding mass in the anterior part of lower and upper jaws. Her complaint was gradual swelling since the last six years. The rest of her medical history was unremarkable. On clinical examination a marked swelling was seen anterior region of both maxilla and mandibula. Intraoral examination showed a firm, purple colored, expansive mass between the teeth number 4 to 13 in the upper and 20 to 29 in the lower (Figure 1). She had Angle Class II, Division 2 malocclusion. There was also an expansion in the anterior segment of palate. Teeth in involved regions were displaced and mobile. Despite the fact that the lesion were extremely large she complained of no pain or paresthesia. Radiographic examination revealed unilocular radiolucent lesions of the involved bone tissue (Figure 2). Histopathological examination confirmed the diagnosis of CGCG.

Under general anesthesia lesions were excised after extraction of involved teeth. The lesions were grossly irregular and encapsulated. Maxillary lesion was 4x5 cm and mandibular lesion was 4x3 cm in diameters (Figures 3 and 4).

Microscopic features of the excised specimens revealed numerous multinucleated giant cells in addition to spindle cells which had oval fusiform nuclei and loose collagenous tissue matrix with a rich network of vessels (Figure 5).

Clinical and radiographic controls at two, six, twelve and twenty for month periods following surgery revealed uncomplicated recovery and no recurrence.

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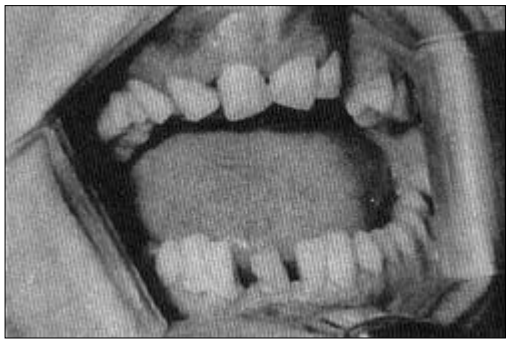
Figure 1: Film and expansive masses between 4 to 13 teeth in the upper and 20 to 29 teeth in lower jaw.



DISCUSSION

Many bone-lesions-such as giant cell tumor secondary to hyperparathyroidism, fibrous dysplasia, cherubism, non-osteogenic fibroma and aneurysmal bone cyst have been shown to have giant cells histopathologically, but central giant cell granuloma can only be seen in jaws (11). It occurs predominantly in children and young adults and more commonly in females (2, 4, 8). The mandible is more frequently affected than the maxilla (1-3, 8).

Despite the fact that the course of the disease is considered benign, there exist some reports in the literature where metastases were observed. Furthermore malignant transformation to ostesarcoma or fibrosarcoma, pleomorphic fibrous histiocytoma has been reported (10,12). Differential diagnosis therefore should include other benign and malignant conditions (1, 4, 5, 9).

The treatment of CGCG is surgical excision and curet-

Figure 2: Unilocular radiolucent lesions location anterior region of both maxilla and mandible in anterior lateral radiograph.

Figures 3-4: Involved teeth and irregular capsulated lesions maxillary and mandibular.

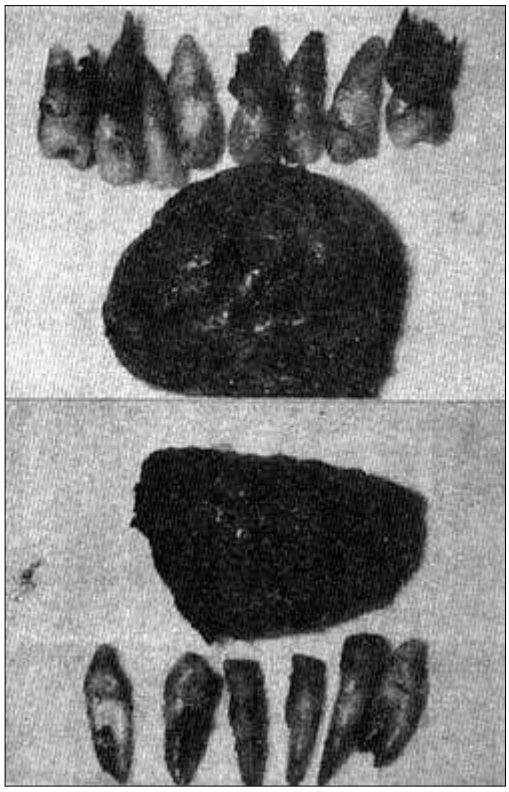
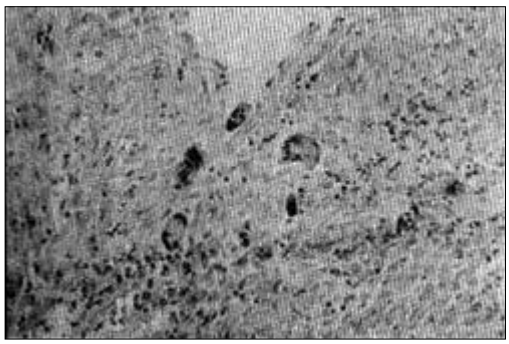


Figure 5: Histological specimen (Multinucleated giant cells and spindle cells which have oval and fusiform nuclei) (X200).



tage, while radiation therapy is contraindicated (1, 9). Procedure of surgical treatment, size and borders of the tumor may effect the chance of recurrence (6, 7, 12).

Ficarra (3) has retrieved 32 giant cell granuloma cases and classified the patients into two groups. In the non-aggressive group of 19 cases the mandible and in 3 instances of the maxilla were the cites involved. In the second group of 10 patients, all with aggressive lesions,

were localized in the mandible.

Waldron (13) and Shafer (9) described this lesion as a reactive response of the bone to repeated unidentified trauma. We believe that Class II Division 2 malocclusion must have played such a long lasting microtraumatic effect in our case.

From this point of view our case seems to support the above referred theory simply by the fact that the corresponding areas of the both jaws have responded with development of identical tumor formations.

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