

GIANT CELL GRANULOMAS OF THE JAWS (ANALYSIS OF 1,083 CASES)

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Abstract—Giant cell granulomas of the jaws are rather common in Iran, however, more reliable data need to be published. In this retrospective study 1,083 cases of PGCG and CGCG (817 peripheral and 203 central) were extracted from 6800 oral biopsy archives of the Oral Pathology Department and were analyzed. Age and sex of the patients and type and location distribution were obtained. Our results show that most cases of PGCG and CGCG occurred before the fifth and during fourth decade, respectively. Slight predominance of females was noted for both types. Mandible was often more affected (60.3%), especially in the premolar-molar region. The results obtained in this study were in agreement with other independent reports. *Acta Medica Iranica* 33 (3&4): 88-90; 1995

Key words: giant cell granuloma; giant cell granuloma of jaws; jaw lesions

INTRODUCTION

Before 1953, scholars generally did not distinguish between the giant cell lesion of the jaws and giant cell tumors of other bones. The jaw tumors were described under various names by different authors. Stewart (1) called them osteoclastomas, and Berger (2) and Bernick (3) referred to them as the giant cell tumors. They have also appeared in the literature under other names such as giant cell sarcoma or myeloid sarcoma. Bloodgood (4) and Codey (5) also stressed the essentially benign nature of this lesion and recommended a more conservative treatment of giant cell tumors (1,2,4).

In 1953, Jaffe (6) proposed the term "Giant Cell Reparative Granuloma" to distinguish these lesions from giant cell tumors that are usually found in the epiphyseal region of long bones. Jaffe believed that these jaw lesions were not true neoplasms and likely represented a local reparative reaction. Subsequently his concept was widely accepted, and since 1953 the jaw lesions have generally been designated as Giant Cell Reparative Granuloma (6).

Although most jaw lesions are slow-growing,

circumscribed processes that respond well to simple curettage, a smaller number demonstrate aggressive clinical behaviour (pain, root resorption, cortical destruction and a tendency to recur after treatment). Because the clinical behaviour of many of these lesions is not consistent with a reparative reaction, the designation "Giant Cell Granuloma" is most widely used today (7).

The aim of this study was to present epidemiology of these common benign oral lesions according to age, sex, locations and types (peripheral or central). These data were taken from the archives of the Oral Pathology Department of Tehran University of Medical Science, School of Dental Medicine.^a

MATERIALS AND METHODS

From 1966 to 1992 all cases reported as giant cell granulomas (peripheral or central) were extracted from the archives of our oral pathology department. They were all stained with hematoxylin and eosin.

A total of 1,083 cases of PGCG and CGCG were selected from 6800 oral biopsies (Fig. 1). Eight cases with insufficient data and 55 repeated cases were excluded from the study. The remaining 1,020 cases were considered for the analysis. Fifty-eight cases with unstated ages were statistically distributed in 8 decades.

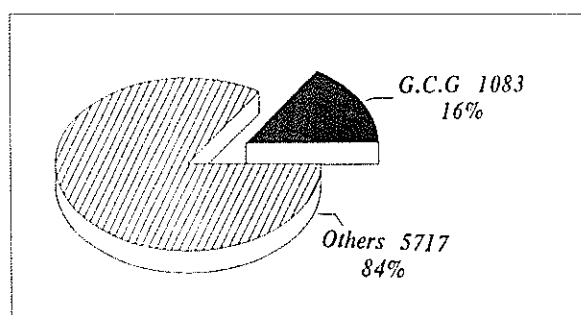


Fig. 1. Frequency of G.C.G in 6800 total oral biopsies (1966-1992).

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^aThis is the main and most reliable referral center for oral lesions in Iran.

RESULTS

There were 1,083 (16%) cases of giant cell granulomas out of 6800 total oral lesions. There were 817 (80%) peripheral type and 203 (20%) central type (Fig. 2). The age for both types ranged from 3 to 82 years. All age groups were affected, with a peak at 4th decade for PGCG and 3rd decade for CGCG (Table 1).

There were 561 (55%) females and 459 (48%) males. This slight predominance of females was noted for both central and peripheral types, showing 67% for the former and 52% for the latter type (Fig. 3). A female predilection was noted in every decade except for the first, second, and 7th decades.

The mandible was more often affected with 615 (60.3%) cases compared to the maxilla with 383 (37.5%) cases (Fig. 4). Location of 22 (2.2%) cases was unstated. Generally, a predilection for the premolar-molar region of mandible was seen for both types. Central lesions, often, were located in anterior area of the jaws crossing the midline.

DISCUSSION

The clinical features of the 1020 cases in the present study were consistent with other independent reports. The PGCG occurred before 5th decade with a peak at 4th decade. Females were slightly more affected. As to the location, similar to the previous reports (3,5,7,8), our study also showed that most of the lesions were in the mandible (474 cases for lower jaw, 323 cases for upper jaw, and 20 cases non-stated).

Concerning the age and gender distribution for CGCG, a female predominance (67%) was identified in our study, which was in agreement with other reports (from 62% to 68%). The early age of presentation (68% before the age of 30) in our findings, was also in agreement with other studies (64% to 75% before age 30).

Studies have shown that mandible is the most common location for intraoral giant cell lesions (60% to 75%), which is in agreement with our finding, of 68% (141/203) (9).

As perviously mentioned, 55 repeated cases were dropped from the study. The repetition was probably due to either recurrence or recording of two pathological reports for the same patient (one for incisional biopsy and the other for excisional one). Among recurrent cases incomplete surgical excision was the most common cause.

The etiology of giant cell granuloma is not completely understood. The present study revealed that

Table 1. Age and type distribution of G.C.G (1966-1992).

Age	Peripheral	Central	Total
0-9	132	22	154
10-19	149	57	206
20-29	108	60	168
30-39	184	37	221
40-49	122	11	133
50-59	80	13	93
60-69	35	3	38
70-(+)	7	0	7
Total	817	203	1020

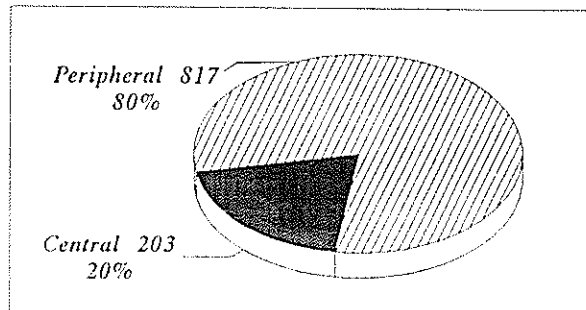


Fig. 2. Type distribution of G.C.G 1020 Cases.

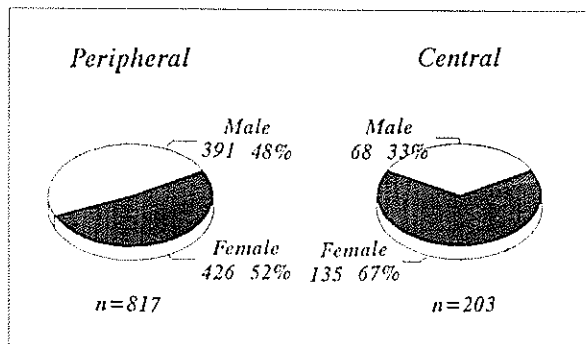


Fig. 3. Sex and type distribution of G.C.G in 1020 Cases (1966-1992).

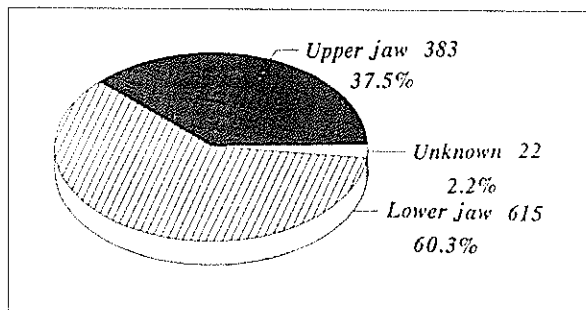


Fig. 4. Distribution of G.C.G by location 1020 Cases (1966-1992).

the frequency of these lesions in Iran is very significant, so the second part of this study was concentrated on the etiologic and pathogenetic points of view. We believe that the incidence of hyperparathyroidism among Iranian people should be ruled out in future studies. Also, immunological concepts of these lesions and recent treatment with corticosteroid are to be further investigated.

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