

PERIPHERAL GIANT CELL GRANULOMA IN MAXILLA- A CASE REPORT

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ABSTRACT

Peripheral giant cell granuloma (PGCG) is reactive lesion of oral cavity with female predilection more than male. The site of lesion is more in mandible than maxilla in posterior region of jaw. A 27 year old Patient came with swelling in front region of maxilla. After clinicoradiological diagnosis we confirm as giant cell granuloma and planned for surgically excision of lesion. its confirm as a peripheral giant cell granuloma histopathologically. Patient was followed for long period no recurrence occurred.

KEYWORDS: Giant cell, lesion, jaw, reactive, peripheral giant cell granuloma.

INTRODUCTION

Peripheral giant cell granuloma is a lesion of the oral cavity which arises mainly from the connective tissue of the gingiva or the periosteum of the alveolar ridge. Peripheral giant cell granuloma (PGCG) was first reported as fungus flesh in 1848.^[1] Jaffe first give the term giant cell reparative granuloma.^[2] BERNER & CAHN proposed giant cell reparative granuloma.^[3] The etiology is unknown but it has been believed that the stimuli is initiated by local irritation and trauma. PGCG is found more commonly in females (65%) than in males (35%). PGCG affects mandible (55%) more than maxilla, mandibular to maxillary prediction is 2.4:1.^[7,8] TYAGI et al stated that maxillary to mandibular site prediction ratio of this lesion to be 1:4^[6] while Pindborg stated that the preferential location for the lesion is the premolar and molar area.^[9] The lesions are usually sessile or pedunculated, red or bluish tumors arising mostly from the gingiva. The recurrence rate of 5.0-70.6% (average 9.9%)^[10] has been

reported in various study. This lesion is probably not a true neoplasm but could be a reactive in nature. Its membrane receptors for calcitonin demonstrated by immunohistochemistry and its osteoclastic activity when cultured invitro are evidence that the lesion having osteoclastic activity^[14-18], whereas other authors have suggested that the lesion is formed by cells of the mononuclear phagocyte system.^[19]

CASE REPORT

A 27 year old female patient came to our department of oral and maxillofacial surgery with chief complain of swelling in upper front region of jaw since 1.5 year. Patient give history of initially swelling was small but increased gradually in size. There was no history of pain but it was bleed profusely for short duration while pricked by some object. no history of trauma or any systemic disease. On extraoral examination facial asymmetry present with lip incompetence. Swelling was present on front region of upper jaw with dimension of 3 × 2 cm (Fig 1). On palpation swelling was soft, nodular mass and reddish blue in color. The lesion was non tender. on radiographic examination (opg & ct) superficial bone resorption was seen beneath the lesion (Fig 2).

After complete hematological investigation patient was planned for surgical excision of lesion under general anaesthesia. The overlying mucosa was incised and undermined (Fig 3). The lesion was excised and separated from adjacent tissue by blunt dissection and removed in one piece. primary closure was done with 3-0 vicryl (Fig4). After excision the lesion was measured with dimension of 5×3×2 cm (Fig 5). the specimen was sent for histological examination. Patient was followed for 1 year there was no recurrence occur(Fig 6).

Histological examination showed that presence of numerous young proliferative fibroblast contain in connective tissue stroma. Abundant multinucleated giant cells of various shapes and size were present. Many of the giant cell nuclei were associated with endothelial lined blood vessels(Fig 7).



Fig. 1: Pre- operative.

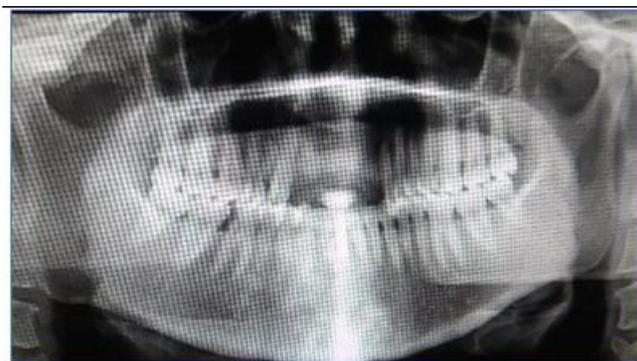


Fig. 2: Preoperative Radiograph.



Fig. 3: Intraoperative excision.



Fig. 4: Primary closure.



Fig. 5: Excised Lesion.



Fig. 6: Postoperative after 1 year

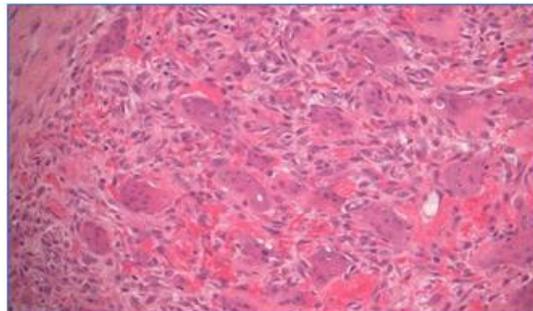


Fig. 7: Histopathologic view.

DISCUSSION

Peripheral giant cell granuloma is a non-neoplastic tumor like reactive lesion which occur on gingiva/alveolar crest. The etiology of PGCG is still not clear. many authors gives different causes like chronic irritation, tooth extraction, xerostomia, hormonal influence, primary hyperthyroidism. it is a reactive lesion. all of the reactive lesion the incidence rate varies from 5.1% to 43.6%.^[4]

PGCG occur at any age but mostly its encounter between 4th to 6th decade of life. The lesion mostly found in female (65%) than male(35%). The predilection for mandible to maxillary is 2.4:1. Pindborg stated that the preferential location for the lesion is the premolar and molar area.^[9]

Clinically the PGCG manifested as a painless, soft, nodular mass usually red to reddish blue in color. It is closely resemble to pyogenic granuloma or fibroma. The PGCG arises from deeper tissue and present as a sessile or pedunculated lesion. PGCG shown variable ranges from small papules to large masses. Its have unique ability of rapid growth and can achieved significant within several month.

The radiographic features of PGCG are non specific as it is a soft tissue lesion but some significant resorption of bone seen beneath the lesion. The lesion involving edentulous area showed resorption of cortical bone in concave fashion beneath the lesion, this feature is known as levelling effect^[7] many authors referred as cupping resorption of this feature.

Microscopic examination of section lesion shows the presence of hyperplastic parakeratinized stratified squamous epithelium. It contain nodule of multinucleated giant cell with a bunch of ovoid and spindle shaped mesenchymal cells with extravasated RBCs. Many authors explained different thought for presence of giant cell. Some explain to be a phagocytic response to hemorrhage in pre-existing granulation tissue other believed that the many arises from the endothelial cells of the capillary periosteum, periodontal ligament or connective tissue of the gingiva.^[11]

The PGCG is treated as surgical excision of lesion and removal of relevant etiological factor. as known the lesion can recur in future if proper elimination of lesion is not done so the lesion is eliminated with entire base of lesion. The elimination of lesion is done by various method like conventional blade, an electrical scalpel to cryosurgery using liquid nitrogen and lesers.^[12,13]

CONCLUSION

PGCG is commonly occurred lesion of oral cavity which is routinely encountered during dental practice. However its close resemble to pyogenic granuloma make diagnosis difficult so confirmation is done by histopathologically. The case was diagnosed by patient history and its reactive behaviour. As the lesion is reactive and increase gradually so excision should be planned as early as possible. There is chance of recurrence of this lesion so patient would be on long follow up period.

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