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RESEARCH ARTICLE

PERIPHERAL GIANT CELL GRANULOMA

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ABSTRACT

Peripheral Giant Cell granuloma is benign inflammatory hyperplasic & reactive exophytic lesion of gingiva & alveolar ridge. This lesion commonly occure as a result of local irritating factors like plaque & calculus, chronic irritation by old prosthesis, overhanging restoration, food impaction and foreign body particles. peripheral giant cell granuloma originates from PDL & gingiva & responsible for pathological migration & mobility of associated teeth. This article presents a case report of large peripheral giant cell granuloma of mandibular gingiva & its management. An excisional biopsy of lesion was performed & diagnosis was confirmed by histopathological examination. The large size of lesion leading to pathological migration of adjacent teeth and reverting back to the original position, and after the treatment along with one year follow-up are discussed here.

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INTRODUCTION

The peripheral giant cell granuloma (PGCG), also known as giant cell epulis, giant cell reparative granuloma, osteoclastoma or giant cell hyperplasia, is a reactive exophytic (growth) lesion of gingiva & alveolar ridge which originate from periodontal ligament or periosteum (Nick katsikevis *et al*., 1988; Bodner *et al*., 1997). It account for 7% of all benign tumors of jaw (Pour *et al*., 2008). The lesion can develop at any age but commonly found in males below 16 years of age and in females above 16 years of age. Clinically peripheral giant cell granuloma present as polyplloidy or nodular lesions, primarily bluish red with smooth shiny or mamillated surface, stalky or sessile base & well demarcated (Nick katsikevis *et al*., 1988; Bansal *et al*., 2011). It is primarily a soft tissue lesion that infrequently affects the underlying bone & show only superficial bony erosion (Catherine M-flaitz, 2000). Histologically, peripheral giant cell granuloma show non-capsulated mass of tissue and contains a large number of connective tissue cells, multinucleated giant cells, hemorrhages & hemosidirine inflammatory cells & newly formed bone & calcified material also seen. (Nick katsikevis *et al*., 1988; Geenbag Glick, 2003) In this article, we present a case report of large peripheral giant cell granuloma which caused pathological migration of teeth in 29 yrs old male, who presented localized tumor like growth in lingual as well as buccal site in interdental area of left anterior region of mandible.

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Case report

A 29 year old male patient reported to the Department of Periodontology with chief complaint of swelling of gums in lower left front region. Patient was not able to close his mouth properly due to large size of the lesion. History revealed that swelling started approximately 8 month ago. This swelling was painless but large enough in size that he was unable to close lips. Medical history was not significant and patient was not having any habit. (Figure 1)

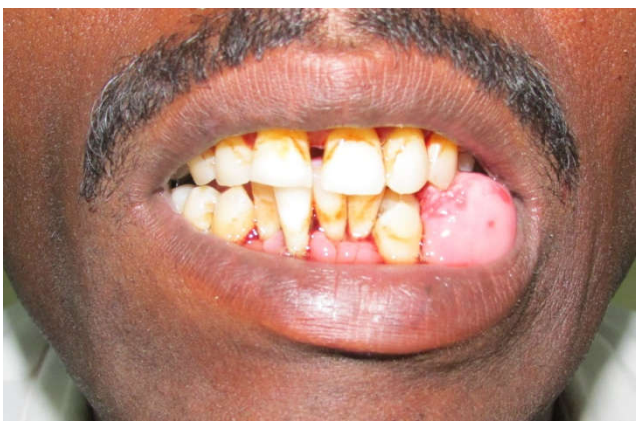

Figure 1. Pre operative clinical photograph

On Intraoral examination, the lesion was smooth, firm in consistency with pedunculated growth, painless, reddish pink in color but not ulcerated. Lesion originated interdentally between mandibular left first premolar and mandibular left second premolar. Size of the lesion is extended 1.5x2 cm on labial aspect & 2.5x2 cm on lingual aspect, giving an hour glass shape appearance. Labially, it extend from distal aspect of 33 up to mesial to 36 involving marginal papillary and attached gingiva. Lingually it extends distal to 32 upto mesial to 36. (Figure 2)

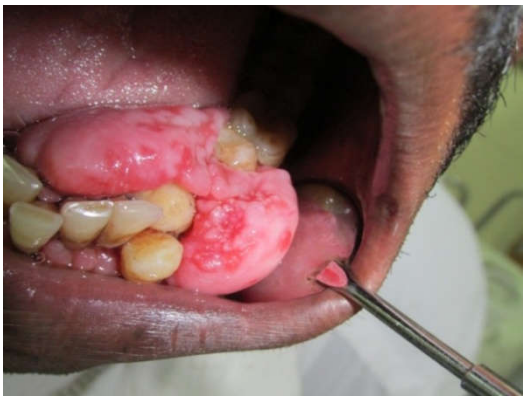

Figure 2. Pre operative clinical photograph

Crowding was seen in 31,32,33,34 region & pathological migration is associated with 33 & 34 on mesial aspect. Excessive pressure of lesion on 34 led to the pathological migration along with grade I mobility of 33 & 34. Intraoral periapical radiograph reveals displacement of 34 & 33 & bone loss upto apical third extending from mesial to 35 & distal to 34.Also seen loss of lamina dura in 35. In OPG it shows no significant radiological changes apart from IOPA. Based on clinical and radiological findings differential diagnosis were pyogenic granuloma, peripheral gaint cell granuloma & peripheral ossifying fibroma.

Treatment plan

Phase I included quadrant wise scaling, oral hygiene instructions, chlorhexidine mouthwash. After 1 week recall, an excisional biopsy of the lesion was performed under local anesthesia (lignocaine and adrenaline 1:80000). The lesion was carefully desiccated & separated from underlying tissue. The specimen was submitted for histopathological analysis. (Figure 3)

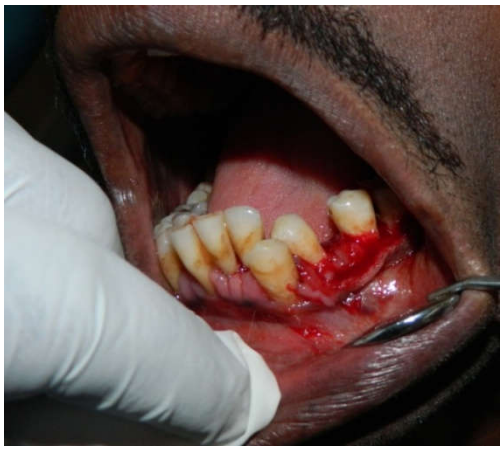

Figure 3. Intra operative clinical photograph

The size of the excised specimen was 1.5x2cm on buccal side & 2.5x 2cm on lingual side. (Figure 4)

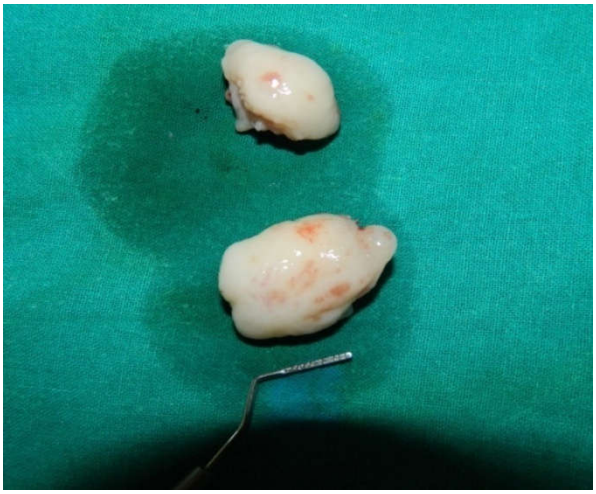

Figure 4. Post Excision Photograph

The bed of the lesion was curetted properly and was examined for remnants. Hemostatsis was achived and coe- pack was given. Patient was recalled every 3rd month for maintenance & to check for possible recurrence. Constant follow-up upto 1year showed no signs of recurrences. (Figure 5)

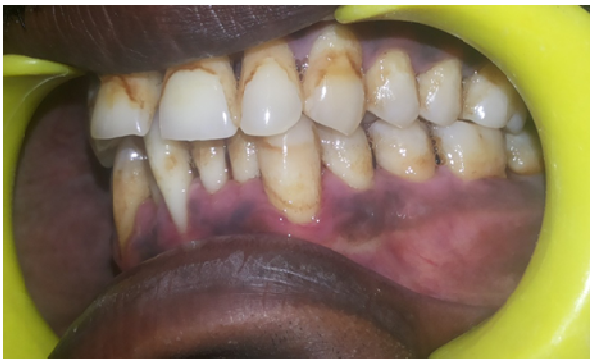

Figure 5. 1 year post operative follow up clinical photograph

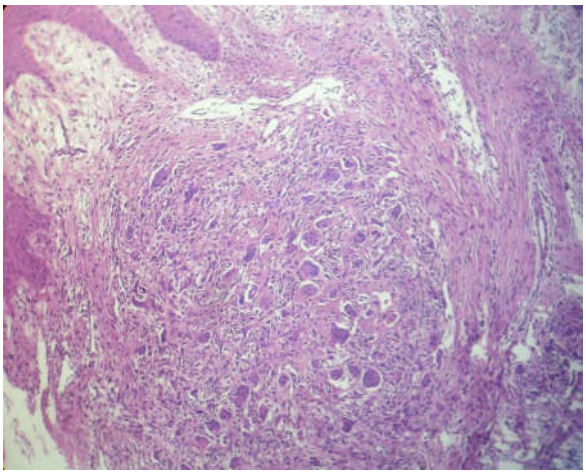

Figure 6. Histopathology of excised PGCG

Histopathological report

The histopathological examination revealed a well circumscribed non-capsulated cellular mass containing oval to spindle shaped fibroblasts, multinucleated giant cells of various

size & shape containing open faced nuclei ranging from 5-15 in number. (Figure 6) Fibrocollagenous stromal proliferations with sprinting of inflammatory cells, immature osteoids or osteoclastic cells were also seen. (Figure 7)

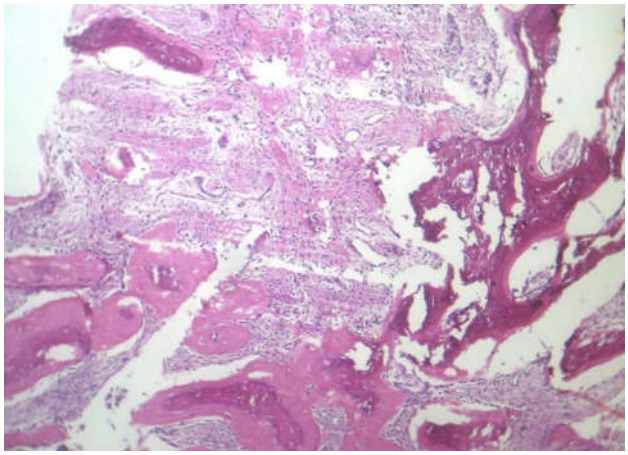

Figure 7. Histopathology of excised PGCG

DISCUSSION

This case of peripheral giant cell granuloma was successfully treated with excision and curettage. The clinical and radiological 12 month follow-up indicates no recurrence and suggested that surgical management as well as maintenance of oral hygiene are adequate to treat peripheral giant cell granuloma. The significant finding in this case leading to space of about 6mm is the distal migration of 33 & 34 & after treatment space created by lesion up to 6mm is completely closed. Tooth reverts back to its normal position when compared with preoperative clinical & radiological findings. Peripheral giant cell granuloma occurs at any age, specially from 1st to 6th decades of life, with the highest incidence rate (40%) at 4th & 6th decade of life (Nick katsikevis *et al*., 1988). A slight female predilection has been reported in large number of studies with the male to female ratio 1:1.5 (1, 5). The gender predilection was found to be more significant among the patient with larger peripheral giant cell granuloma in a study carried by Bodner *et al*. (1997). In the present case report, the peripheral giant cell granuloma was split in buccally & lingually with approximately size more than >2 an in both sides. It led to pathological migration of 34 up to 6mm mesially & had grade I mobility. Histologically, peripheral giant cell granuloma showed spindle shaped fibroblasts, excessive number of multinucleated giant cells scattered into cells scattered into connective tissue stoma (Bansal *et al*., 2011). A reactive nature of origin has found in several immunohistochemical and ultra structural studies. The mononuclear cell stain positive with histocyte markers (α-1 antichemotripsine and lysosome) also show positive reaction to CD-68, a macrophages-associated antigen. In the present case vascular proliferation of fibroblasts was seen in calcified tissue. The woven bone is produced by mononuclear stromal cell. A peripheral giant cell granuloma is manifestation of hyper-parathyroidism (endocrine disorders). The treatment consists of local surgical excision with the help of 15no blade under local anesthesia (lignocaine and adrenaline 1:80000). Local factors or irritant like calculus was removed, followed by deep curettage to infected soft tissue & superficial bone. In presented case there is no recurrence of lesion. The main significant finding is tooth 34 come to its normal position & the space is closed. After excision interdental space is 6mm but after healing of 12 month the space is lost & 34 comes to its normal position & occlusion, with loss of mobility.

Conclusion

The present case is reported because of unusual mode of presentation. It showed large lesion which cause inability be close the month. Although it is benign in nature but still it can cause pathological migration of teeth & mobility. Its diagnosis is confirmed clinically & histologically .Along with the excision treatment the case also show spontaneous correction or reposition of pathologically migrated teeth,and its rare when associated with peripheral giant cell granuloma.

REFERENCES

Bansal P, Rahatgis, Agnihotri A, Guptha A. 2011. Non-syndromic multiple impacted supernumerary teeth with peripheral gaint cell granuloma contemp clin Dent, 2:41-44

Bodner L. Peist M, Galot A Fliss DM. 1997. Growth potential of peripheral gaint cell granuloma. Oral Surgery, oral medicine, oral pathology, oral radiology & Endology, 83 ; 543-551.

Catherine M-flaitz, 2000. Peripheral gaint cell granuloma; A potentially aggressive lesion in clinden pediatric dentistry 22: issue 3, 232-233.

Geenbag Glick: Barket oral medicine, diagnosis of treatment, 9th edition 2003.

Gworge lastin, colour atlas of oral disease second edition.

Nick katsikevis, kakarantza-Angelopoulou E, Angelopoulous AP. 1988. Peripheral gaint cell granuloma: Clinicopathological study of 224 new cases and review of 956 reported cases; *International J Oral & Maxillofacial Surgery*, 11 issue 2 : 94-99.

Pour MAH, Rad M. and Mojtahedi A. 2008. A survey of osft tissue tumer like lesion of oral cavity: A Clinicopathological study. *Iranian Journal of Pathology*, 3: 81-87.

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