ECRONICON OPEN ACCESS

EC DENTAL SCIENCE
Case Report

A Large Telangiectatic Granuloma In Paediatric Patient and its Management- A Case Report

Kajal Dave[1], Shivani Sachdeva[2] and Harish Saluja[3]*

[1]*Department of Periodontology, Associate Professor, College of Dental Sciences and Research Centre, Ahmedabad, India*

[2]*Professor, Department of Periodontology, Rural Dental College, Pravara Institute of Medical Sciences, Maharashtra, India*

[3]*Professor, Department of Oral and Maxillofacial Surgery, Rural Dental College, Pravara Institute of Medical Sciences, Maharashtra, India*

***Corresponding Author:** Harish Saluja, Professor, Department of Oral and Maxillofacial Surgery, Rural Dental College, Pravara Institute of Medical Sciences, Maharashtra, India.

Received: September 16, 2022; **Published:** September 27, 2022

Abstract

Telangiectatic granuloma or pyogenic granuloma is the inflammatory hyperplasia which is seen in oral cavity. The unexpected clinical course and rapid increase in size and recurrences draws much of the attention. The various etiological factors involved are the stimuli to a low- grade irritation, traumatic injury or hormonal factors. It mostly affects in second decade of life and that too in young female patients may be due to vascular effects of female hormones. The present case report is of a young boy merely 12 years of age who had difficulty in mastication due to large gingival overgrowth which enlarged in size in just 2 - 3 months. Although, telangiectatic granuloma is a non- neoplastic growth in oral cavity, still a proper diagnosis, prevention, and management is very important. Surgical excision is treatment of choice.

Keywords: *Telangiectatic Granuloma; Gingival Enlargement; Puberty Induced Gingival Enlargement*

Background

The term 'Telangiectatic granuloma' was introduced by Sabrazer and Laubie in 1899. The common reactive neoformation of the oral cavity is formed by granulation tissue and develops in response to local irritation or trauma. The pyogenic granuloma was first described in 1844, by Hullihen's in English literature [1].

The most commonly used term pyogenic granuloma is a misnomer in a sense that it does not adequately describe the lesion's characteristics. The term "pyogenic" implies to pus production related to an infectious etiology; however, no pus producing microorganisms are associated with it [2].

Case Description

The case is of 12- year- old boy with the chief complaint of difficulty in masticating from left side extending from canine till mesial of first molars. The growth occurred in a period of just two months which was quite alarming for patient as well as the dentist. The clinical

examination revealed that the lesion was approximately of 1.5 * 2 cm in length and width extending both buccally as well as palatally. There was difficulty in chewing and constant discomfort because the lesion was so large that it interfered in mastication and at the level of occlusal table (Figure 1 and 2).

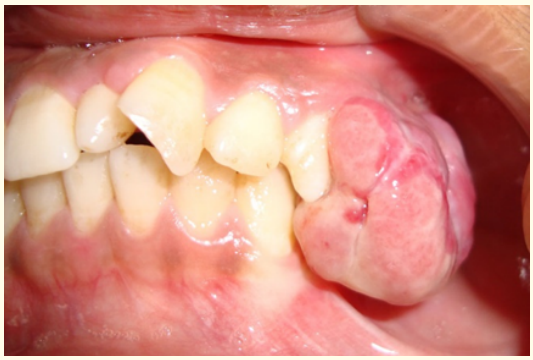

Figure 1: *Preoperative buccal view.*

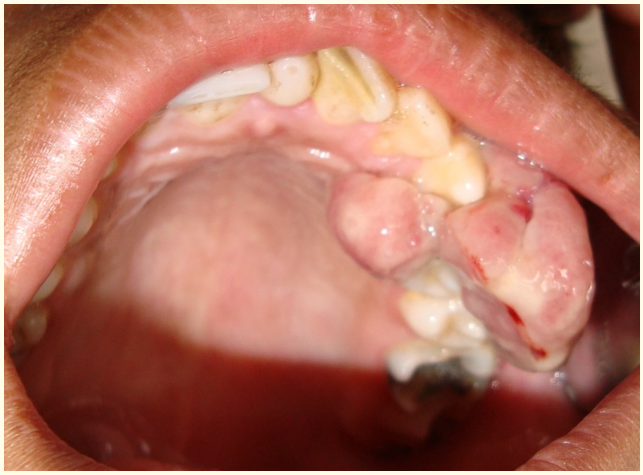

Figure 2: *Preoperative occlusal view.*

The growth was fiery red and on palpation it was soft, pedunculated and non-tender which bled easily.

Treatment protocol

The preoperative intraoral periapical radiograph was taken and it depicted minimal crestal bone loss along with that complete hemogram was done and found to be in normal limits (Figure 3). A provisional diagnosis of pyogenic granuloma was made.

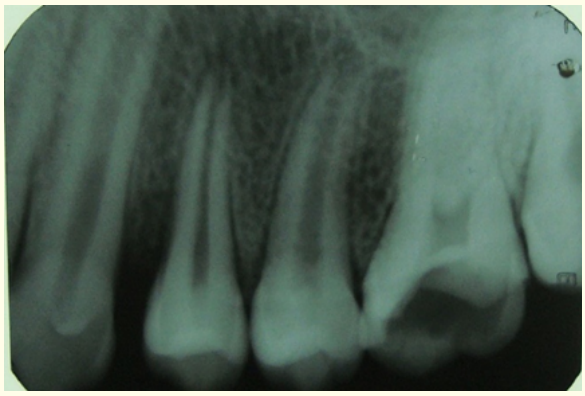

Figure 3: *Intraoral radiograph depicting oral lesion.*

The treatment was initiated after scaling and root planing which was performed along with chlorhexidine gluconate mouthwash 0.12%. The lesion was pulled little to make the peduncle visible. The growth was excised from the peduncle area with #15 blade under profound local anaesthesia. The lesion was excised along with 1mm of normal tissue (Figure 4). Deep curettage was performed to remove the remnants of tissue. Coe-pack was given and excised tissue was sent for histopathological diagnosis.

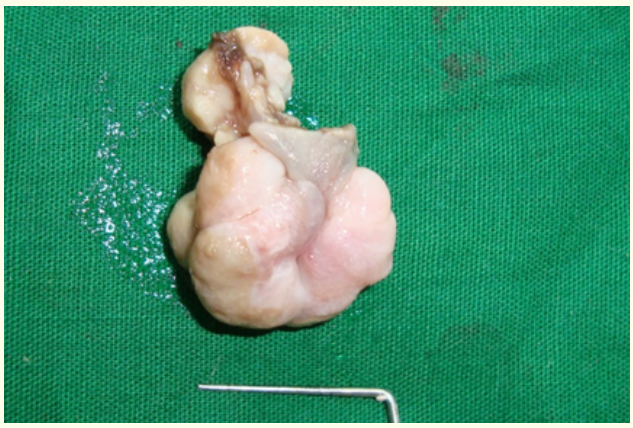

Figure 4: *Excised lesion.*

On histopathological diagnosis, parakeratinized stratified squamous epithelium was proliferated at some places while at others it was atrophied and ulcerated. The blood vessels in connective tissue were of varying diameters and were organized in lobular aggregates. Proliferating plump endothelial cells were also seen in the connective tissue. Polymorphs, as well as chronic inflammatory cells, were consistently present throughout the oedematous stroma. On the basis of clinical and histopathological examination the final diagnosis of telangiectatic granuloma (TG) was made (Figure 5).

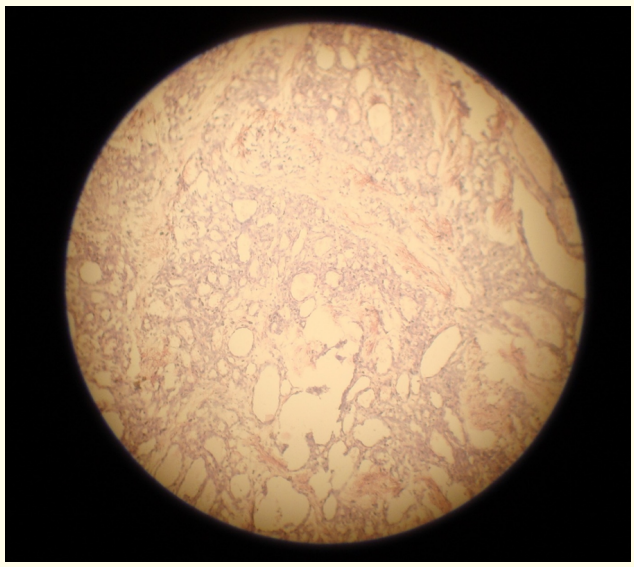

Figure 5: *Histopathological slide showing telangiectatic granuloma in 10X.*

Outcome and recall

Recall and evaluation was done immediately after 1 week postoperatively was. Healing was uneventful and satisfactory for all the cases and follow up was done for patients after 6 months which showed uneventful healing (Figure 6).

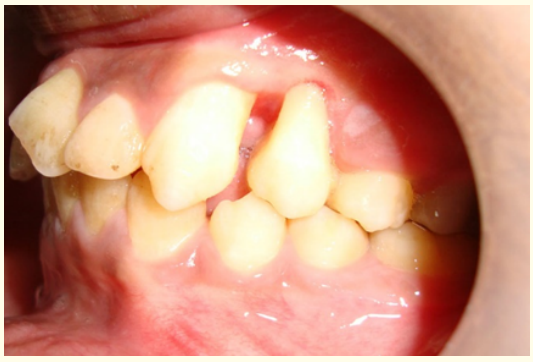

Figure 6: *Recall after 6 months depicting uneventful healing.*

Discussion

The term 'Pyogenic granuloma' was coined by Hartzell in 1904 which is a misnomer. In reality it arises in response to various stimuli like low grade local irritation, trauma or hormonal factors [2]. Various different synonyms like pyogenic granuloma, botryomycosis homi-

nis, Croker and Hartzell disease, lobular capillary haemangioma and eruption capillary haemangioma are used for the oral lesion. Most dominant etiological factor is trauma approximately one third of the lesions occur due to it and the other predisposing factor could be poor oral hygiene.

Aguilo [3] reported the formation of the pyogenic granuloma as a result of an injury to a primary tooth and Milano., *et al*. (2001) reported a case of pyogenic granuloma associated with aberrant tooth development. Some factors such as inducible nitric oxide synthase, vascular endothelial growth factor and basic fibroblast growth factor are known to be involved in angiogenesis and rapid growth of the lesion [2]. Additionally, some drugs such as cyclosporine have an important role in genesis of pyogenic granuloma. Iatrogenic stimulations like guided tissue regeneration are reported by Fowler., *et al* [4].

Telangiectatic granuloma can occur in all ages but it is predominant in second decade of life in young adult females, possibly due to vascular effects of female hormones [5] which was in contrary to our case report where it occurred in young boy. In contrast a recent study reported that the average patient age was 52 years with peak incidence of occurrence in the sixth decade of life.

The predominance in women (1: 1.2) is found which is in contrast with our finding [6]. Oral telangiectatic granuloma shows a striking predilection for gingiva accounting for 75% of all cases. The lips, tongue and buccal mucosa are the next most common sites.

According to Stablein MJ, Silverglade LB [7] majority of pyogenic granuloma are found on the gingiva in 28.5% biopsies while with only 2.9% of the alveolar mucosal biopsies which also are supportive for our cases. The lesion is clinically smooth or lobulated exophytic lesion manifesting as small as red erythematous papules on a pedunculated or sometimes sessile base, which is usually haemorrhagic and compressible and may develop as dumb-bell shaped masses [2].

Clinical development of lesion is mostly slow with asymptomatic growth and painless but it may grow rapidly. The surface is characteristically ulcerated and friable which may be covered by a yellow, fibrinous membrane and its colour ranges from pink to red to purple, depending on the age of the lesion [2].

There are two kinds of pyogenic granuloma namely: Lobular capillary hemangioma (LCH) and non-Lobular capillary hemangioma (NLCH) type which differ in their histological features. LCH occurred more frequently (66%) as a sessile lesion, whereas non- LCH mostly occurred as pedunculated (77%). In the present case report the lesion was pedunculated which confers.

The treatment of choice is excisional biopsy though some other treatment modalities such as use of Nd: YAG lasers, flash lamp pulsed dyed laser, cryosurgery, intralesional injection of ethanol or corticosteroid and sodium tetradecyl sulfate sclerotherapy have also been proposed [2].

Alarm for both the patient and clinician is the telangiectatic granuloma who may fear that the lesion might be malignant. Recurrence rate is enormously high in comparison to the other benign lesion that is about 16% [2].

Differential diagnosis

Peripheral Giant Cell Granuloma was one of the differential diagnosis, which was indistinguishable from TG, however it is more often purplish- bluish in colour compared to bright red colour of TG. Histologically, the presence of multinucleated giant cells sets it apart from the present case [5]. Another, consideration could have been of Peripheral Ossifying fibroma (POF), which is indistinguishable except light colour of POF and histologically also it shows fibrous proliferation associated with formation of mineralized products with minimal vascular component and ossification.

One important differential diagnosis of TG is haemangioma which is developmental disorder that manifests in 1 month of life. On diascopy there is evacuation of patent blood filled spaces that constitute the lesion. This entity is mostly located on tongue and lips. Kaposi's sarcoma occurs in AIDS/HIV patients and histologically proliferation of spindle cells, atypical endothelial cells pleomorphism are seen.

Conclusion

Telangiectatic granuloma has rapid growth and is an alarm for both the patient and clinician who may fear that the lesion might be malignant due to fast growth rate. There are two kinds of pyogenic granuloma namely: Lobular capillary hemangioma (LCH) and non-Lobular capillary hemangioma (NLCH) type which differ in their histological features. LCH occurred more frequently (66%) as a sessile lesion, whereas non- LCH mostly occurred as pedunculated (77%). Lesions are slightly more common on the maxillary gingiva than the mandibular gingiva; anterior areas are more frequently affected than posterior areas [2]. It occurs predominantly in females as well as in second decade of life. Also, these lesions are much more prevalent on the facial aspect of gingiva than the lingual aspect. Although TE is non-neoplastic benign growth in oral cavity; proper diagnosis, prevention, and management is very important. Surgical excision is the treatment of choice. Recurrence is not infrequent; so in such cases follow-up and re-excision may be necessary.

Bibliography

1. Hullihen SP. "Case of aneurism by anastomosis of the superior maxilla". *American Journal of Dentistry* 4.3 (1844): 160-162.
2. Jafarzadeh H., *et al*. "Oral Pyogenic granuloma: a review". *Journal of Oral Science* 48.4 (2006): 167-175.
3. Aguilo L. "Pyogenic granuloma subsequent to injury of a primary tooth. A case report". *International Journal of Paediatric Dentistry* 12.6 (2002): 438-441.
4. Fowler EB., *et al*. "Pyogenic granuloma associated with guided tissue regeneration- a case report". *Journal of Periodontology* 67.10 (1996): 1011-1015.
5. Neville BW., *et al*. "Oral and Maxillofacial Pathology". 2nd edition Philadelphia WB Saunders (2002): 437-495.
6. Lawoyin JO., *et al*. "Oral Pyogenic granuloma: a review of 38 cases from Ibadan, Nigeria". *British Journal of Oral and Maxillofacial Surgery* 35.3 (1997): 185-189.
7. Stablein MJ and Silverglade LB. "Comparative analysis of biopsy specimens from gingiva and alveolar mucosa". *Journal of Periodontology* 56.11 (1985): 671-676.

Volume 21 Issue 10 October 2022