

Telangiectatic Granuloma- A Case Series

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Abstract

Background: Telangiectatic granuloma is one of the inflammatory hyperplasia seen in oral cavity; it has got particular significance because of its unexpected clinical course. It arises in response to various stimuli such as low grade irritation, traumatic injury or hormonal factors. It predominantly occurs in second decade of life in young females, possibly because of vascular effects of female hormones.

Case Report: This article presents five case presentations of gingival overgrowth. All the cases were treated and histopathological examinations were done for accomplishment of definitive diagnosis to rule out various neoplastic possibilities as the lesion resembles a true neoplasm.

Conclusion: Although telangiectatic granuloma is a non-neoplastic growth in oral cavity; proper diagnosis, prevention, and management is very important. Surgical excision is the treatment of choice.

Keywords: Pyogenic Granuloma; Inflammatory Hyperplasia; Gingival Overgrowth

Background

'Telangiectatic granuloma' term was given in 1899 by Sabrazer and Laubie. It is a common reactive neoformation of the oral cavity, which is composed of granulation tissue and develops in response to local irritation or trauma. Hullihen's description in 1844 was most likely first case of pyogenic granuloma 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 pus production related to an infectious etiology; however, no pus producing microorganisms are associated with it [2].

The five cases reported of TG presented as smooth, inflamed and gingival lesions which were prone for bleeding. All the patients were young females aged between 14 and 35 years. An excisional biopsy was planned and the patients were followed up for a period of 6 months and with one recurrence.

Case Reports

The present case series was compiled in pravara institute of medical sciences. All the five cases visited the OPD of RDC, Loni in the year 2015. The clinical profile of patients was taken and subsequently they were treated. The table 1 describes in detail their outlines.

Name of patient	Age (years)	Sex	Localization of swelling with teeth	Size	Color	Pedunculated OR Sessile	Recurrence
1. Ansari Ali	14	F	#23 and # 24	20 mm × 15 mm × 10 mm	Deep red	Ped	No
2. Hirabai	35	F	#34 and # 36	18 mm × 13 mm × 8 mm	Red	Ped	No
3. Shenaz Khan	33	F	#32 and # 33	7 mm × 8 mm × 5 mm	Red	Sessile	Yes
4. Tasleem Khan	34	F	#11 and #21	11 mm x 5 mm x 5 mm	Deep Red	Sessile	No
5. Jyoti	19	F	#25 and # 26	10 mm x 5 mm x 3 mm	Red	Sessile	No

Table 1: Clinical profile of cases.

On clinical examination and palpation all the lesions were red, soft, inflamed and non-tender growths which bled easily. The preoperative views were taken for all the patients (Figure 1a, 2a, 3a, 4a, 5a). They were associated with local irritants. Phase I therapy was carried out along with complete haemogram which was found to be in normal limits. Radiographically interdental crestal bone loss was observed only in first and second case.

A provisional diagnosis of pyogenic granuloma was made. The lesions were excised with number 12 blade under local anesthesia along with the curettage of the area and Coe-pack was given.

Excised tissue was sent for histopathological diagnosis, which revealed parakeratinized stratified squamous epithelium which was proliferated at some places while at others 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 edematous stroma. On the basis of clinical and histopathological examination the final diagnosis of telangiectatic granuloma (TG) was made (Figure 6). Evaluation immediately after 1 week postoperatively was carried out (Figure 1b, 2b, 3b, 4b, 5b). Healing was satisfactory for all the cases and follow up was done for patients after 6 months except for the case 5 which didn't give the follow up.



Figure 1a: Preoperative view.



Figure 1b: Postoperative view.



Figure 2a: Preoperative view.



Figure 2b: Postoperative view.



Figure 3a: Preoperative view.



Figure 3b: Postoperative view.



Figure 4a: Preoperative view.



Figure 4b: Postoperative view.



Figure 5a: Preoperative view.



Figure 5b: Postoperative view.

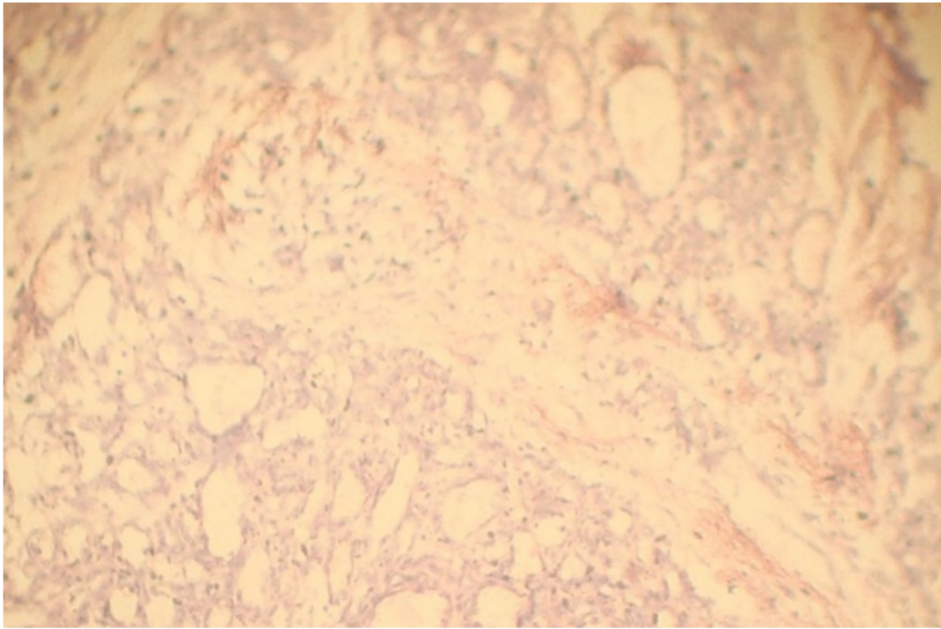


Figure 6

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 names have been given to this entity, reflecting, in part, mistaken concepts about its etiopathogenesis like Pyogenic granuloma, Botryomycosis hominis, Croker and Hartzell disease, Lobular capillary haemangioma and Eruption capillary haemangioma [3].

Approximately one third of the lesions occurred after trauma. Poor oral hygiene might be a predisposing factor. Aguilo [4] 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* [5].

Although telangiectatic granuloma occurs in all ages, it is predominant in second decade of life in young adult females, possibly due to vascular effects of female hormones [6] which was similar to finding in our series. 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 confers with our finding [7].

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. Lesions are slightly more common on the maxillary gingiva than the mandibular gingiva; anterior areas are more frequently affected than posterior areas [2]. Also these lesions are much more common on the facial aspect of gingiva than the lingual aspect. According to Stablein MJ, Silverglade LB [8] 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.

Clinically, it is a smooth or lobulated exophytic lesion manifesting as small, red erythematous papules on a pedunculated or sometimes sessile base, which is usually hemorrhagic and compressible and may develop as dumb-bell shaped masses [2].

The size varies in diameter from a few millimeters to several centimeters. Rarely the lesion exceeds 2.5 cm in size and it usually reaches its full size within weeks or months, remaining indefinitely thereafter. Clinical development of lesion is slow, asymptomatic 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 color 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 our case reports the case one and two were only pedunculated.

Although excisional surgery is the treatment of choice for it, 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].

Telangiectatic granuloma exhibits rapid growth which creates an alarm for both the patient and clinician who may fear that the lesion might be malignant. Recurrence rate is as high as about 16% [2]. There was one recurrence (case 3) among the five cases in case series and that was planned for re-excision.

The differential diagnosis of Peripheral Giant Cell Granuloma was considered, which is indistinguishable from TG, however it is often more bluish purple compared to bright red color of TG and histologically the appearance of multinucleated giant cells which sets it apart

from present case [6]. Another consideration can be Peripheral Ossifying fibroma (POF), which is indistinguishable except light color of POF and histologically it shows fibrous proliferation associated with formation of mineralized product, minimal vascular component and ossification. One important differential diagnosis of TG is hemangioma 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

Although telangiectatic granuloma is a non-neoplastic 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.

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