

Restoring Soft Tissue Contours Following Crocker and Hartzell Disease: A Case Report

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ABSTRACT

Crocker and Hartzell disease also known as pyogenic granuloma is one among the inflammatory hyperplasia seen within the oral cavity. The term is a misnomer due to the fact the lesion is unrelated to contamination and pus and in reality, arises in response to numerous stimuli such as low-grade local irritation, traumatic harm or hormonal factors. The peak occurrence is in teens and young adults, with a female predilection of 2:1. This case report describes a pyogenic granuloma in a female patient, discussing the clinical features and histopathologic features and also the successful management of the lesion.

Keywords: Inflammatory hyperplasia, pyogenic granuloma, misnomer, excisional biopsy, hemangioma.

INTRODUCTION

Crocker and Hartzell disease also known as pyogenic granulomas are commonly occurring non-neoplastic, localized, soft tissue growths. [1] Hullihen was first to describe the case of pyogenic granuloma in English literature in 1844. In 1904, Hartzell gave the current term of "pyogenic granuloma" or "granuloma pyogenicum". It is also known by different names such as Telangiectatic granuloma, Haemangiomatic granuloma, Lobular capillary haemangioma, Pregnancy tumor. [2]

The term pyogenic granuloma is misnomer as it is not associated with pus and histologically it is angiomatous rather than granulomatous. It is more commonly

seen in the second and third decades of life with female predilection. [3] These may be visible in any size from a few millimetres to numerous centimetres. Pyogenic granuloma of the oral cavity is thought to involve the gingiva normally (75% of all cases) hardly ever it could present extra gingivally. [4]

In this case report we have presented a case of a pyogenic granuloma of the gingiva in a 33-year-old female patient who presented with localised tumor like enlargement in the lower front tooth region. We have also reviewed the literature and discussed the present case with its clinical and histological features and therapeutic modalities.

CASE REPORT

A 33-year-old female reported to the Department of Periodontics with the chief complaint of swelling of gums in the lower front tooth region since 4 months. Swelling was initially of smaller size which increased to the present size over the period of time. There was no pain until 2 months back but since the growth increased in size the patient gave history of pain on mastication. Patient was unaware of any initial trauma to the site of the lesion and had stopped brushing the area due to bleeding from it.

On extraoral examination, there was no visible swelling and no raise in temperature and no regional lymphadenopathy. Intraoral examination revealed a large pedunculated lobulated gingival overgrowth extending on buccal surfaces of 31,41, and lingual surfaces of

31,32,41. it was reddish pink in color with white patches and was approximately 16mm x 15 mm in size. The surface was smooth no ulcerations were seen. Lingually it extended beyond the occlusal plane of the teeth. Growth was non tender and firm on palpation and on probing. Associated teeth did not show any mobility. Radiographically

no visible abnormalities were seen and the alveolar bone in the region of the growth appeared normal. Routine hemogram was found to be normal. A provisional diagnosis of pyogenic granuloma was made. Its differential diagnosis includes peripheral ossifying fibroma, peripheral giant cell granuloma, hemangioma and fibroma.



FIGURE 1: INTRAORAL VIEW OF THE LESION (LINGUAL)
FIGURE 2: INTRAORAL VIEW OF THE LESION (BUCCAL)
FIGURE 3: INTRA-OPERATIVE PERIAPICAL RADIOGRAPH OF THE LESION

The patient did not have any systemic problems so the case was prepared for excision on the basis of clinical and radiographic evidence. After doing oral prophylaxis the lesion was excised under aseptic conditions. Excision of the lesion was carried out under local anaesthesia using a scalpel and blade, followed by curettage and through scaling of the involved teeth. Coe pack was placed and the patient was recalled after 1 week for removal of the pack and check-up. The excised tissue was then sent to the Department of Oral Pathology for histologic examination.

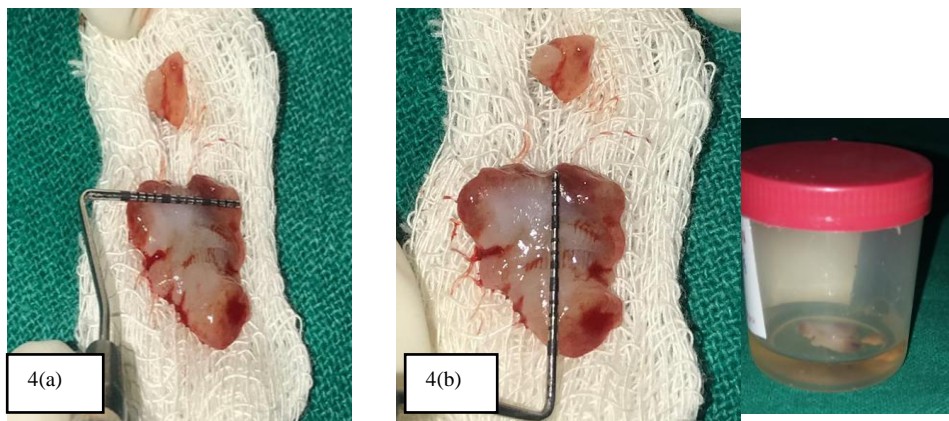


FIGURE 4(a,b): EXCISION OF THE LESION DONE WITH SCALPEL
FIGURE 5: STORAGE OF LESION

Histopathological report revealed parakeratinized epithelium, exhibiting spongiosis in the superficial layers with long and thin rete ridges enclosing a richly vascular, loose and edematous connective tissue with dense amount of inflammatory

cell infiltrate. The blood vessels are well formed with variable calibre. The diagnosis of pyogenic granuloma was histologically confirmed.

The patient was recalled after every 3rd month for maintenance and to check for

its possible recurrence. 1 year follow up of this case was done and there has been no recurrence so far.

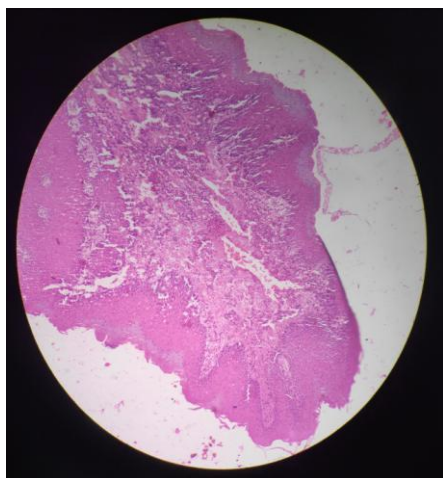


FIGURE 6: HISTOPATHOLOGY OF THE LESION

DISCUSSION

Pyogenic granuloma is a reactive tumor like lesion mainly affecting the oral cavity. According to Bhaskar et al, pyogenic granuloma makes up for 1.85% of all oral pathologies. It shows predilection for gingiva but can occur in other sites also like lips, tongue, buccal mucosa and palate and usually it is slow growing in nature. Presents as a sessile lesion to an elevated pedunculated mass and is generally soft, painless and deep red to reddish-purple in colour. Size may vary from few millimetres to few centimetres. [5]

Pyogenic granuloma occurs due to an inflammatory response that follows chronic irritation due to poor oral hygiene, calculus, excessive restorations or due to trauma or aberrant tooth development and occlusal interferences. [6]

Immunosuppressive drugs such as cyclosporine may also be involved in its genesis. Regezi et al suggested an exuberant connective tissue proliferation to a known stimulus or injury like calculus or foreign material within gingival crevice. [3]

Pyogenic granuloma occurs frequently during pregnancy especially during the second and third trimesters and is referred to as pregnancy tumor. Increase levels of estrogen and progesterone modify the vascular response to local irritants that lead

to the occurrence of the lesion (Yung, Richardson and Krotochvil). [7]

Cawson et al have described two variants of pyogenic granuloma namely lobular capillary hemangioma and non-lobular capillary hemangioma depending upon the rate of vascularity and proliferation. Lobular type shows proliferation of blood vessels organized in lobular aggregates whereas in non-lobular type-high vascular proliferation resembling granulation tissue is present hence, suggesting that there might be different evolutionary pathways for pyogenic granuloma. [8]

The course of pyogenic granuloma can be divided into three distinct phases as suggested by Sternberg et al. the early phase which reveals a compact cellular stroma with little lumen. Next is capillary phase described by lobules which are highly vascular with abundant intraluminal red blood cells. The last phase is involutory phase which shows intra and perilobular fibrosis which is suggestive of healing phase. [9]

Differential diagnosis includes peripheral ossifying fibroma, Kaposi sarcoma, angiosarcoma, hemangioma, peripheral giant cell granuloma and non-Hodgkin's lymphoma. Fibroma can be distinguished by the texture, consistency and lighter colour and Kaposi sarcoma can be differentiated histopathologically. It can be distinguishable from angiosarcoma by its lobular growth pattern, cytologically bland endothelial cells. [10]

Excision and biopsy of the lesion is considered to be the recommended line of treatment. Conservative surgical excision of the lesion with removal of irritants along with plaque, calculus and overseas substances is suggested for small painless non-bleeding lesions. Excision of the gingival lesions up to the periosteum with through scaling and root making plans of adjacent tooth to put off all visible sources of irritation is usually recommended. [11]

Different treatment modalities have been used by diverse clinicians which

includes use of Nd: YAG laser, carbon dioxide laser, flash lamp pulse dye laser, cryosurgery, electrodesiccation, sodium tetradecyl sulfate sclerotherapy and use of intra-lesional steroids. [12]

CONCLUSION

From the prevailing case document, it is concluded that pyogenic granuloma can be appropriately treated with the suitable analysis and proper remedy planning. Even though pyogenic granuloma is a relatively common condition a thorough understanding is prudent to differentiate it from similar clinical presentations. A careful control of the lesion also facilitates in preventing the recurrence of this benign lesion.

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