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"Pyogenic Granuloma: Patterns, Presentations, And Treatment Outcomes"

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ABSTRACT

Background- One of the inflammatory hyperplasia observed in the oral cavity is pyogenic granuloma. It is a benign, non-neoplastic lesion of the oral cavity that is rather frequent on gingiva. It often occurs in reaction to a variety of stimuli, including low-grade local irritation, severe damage, hormonal variables, or some medicines. This paper presents some cases of a pyogenic granuloma managed by surgical intervention.

Method- 3 patients with pyogenic granuloma diagnosed and treated using surgical intervention. Excision was carried out using electrocautery under local anaesthesia. Complete excision was carried out haemostasis achieved and follow up was taken.

Results- After careful excision uneventful healing was observed during follow up visit.

Conclusion- Excision of pyogenic granuloma using electrocautery is an effective treatment.

INTRODUCTION

Pyogenic granuloma (PG), also known as lobular capillary hemangioma, is a common, acquired, benign vascular proliferation of the skin and mucous membranes [(1)]. Oral pyogenic granuloma is the most common of all the oral tumour like growths [(2)]. While the terminology implies a benign neoplasm. Hartzell in 1904 coined the term pyogenic granuloma. In 1844 Hullihen's reported the first case of pyogenic granuloma [(3)]. About one-third of the lesions occur following trauma. Poor oral hygiene may be a precipitating factor as 75% of all cases show calculus or foreign material in gingival sulcus. Lesions are more common in maxillary than mandibular gingiva; lesions are more common on the facial aspect of gingiva than gingival aspect [(4)].

Various contributing factors for its etiopathogenesis include hormonal factors, local irritation, traumatic injury and/or certain drugs. The response to these chronic irritants manifests itself as fibrovascular connective tissue hyperplasia which leads to the formation of pyogenic granuloma. Histologically, there are two types of pyogenic granuloma namely, lobular capillary haemangioma and non-lobular capillary haemangioma.

In this series, we present to you, three cases of Pyogenic granuloma occurring at different locations in the oral cavity. All the diagnostic and treatment aspects along with histopathologic information and follow up status has been put forth [7].

CASE REPORTS

CASE 1

A 26year old male patient reported with a chief complaint of swelling on gums at lower front region of jaw since 3years and which was gradually increasing in size. Clinical examination revealed localized gingival swelling of 1 cm X 1 cm size, sessile in nature, reddish pink in color on labial aspect of 43. Swelling was smooth painless and asymptomatic except for slight discomfort to the patient due to growth. On hard tissue examination there were traumatic occlusion with 43 and 13 with moderate plaque and calculus.

For surgical excision after local anaesthesia the lesion was excised using electrocautery. After ensuring complete excision periodontal dressing is given for 7 days. Antibiotics and analgesics were prescribed for 3 days.

Based on histological report it was diagnosed as pyogenic granuloma.

Fig 1.1 pyogenic granuloma with 43,44

Fig 1.2 immediately after excision

Fig 1.3 uneventful healing after 3 weeks

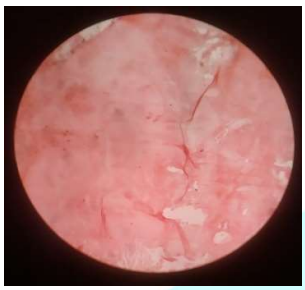

Fig 1.4 histological picture

CASE 2

A 25year old female patient reported with chief complaint of swelling in lower front region of jaw since 1year which was gradually increasing in size. Clinical examination revealed localized gingival swelling of 1 cm X 1 cm size, sessile in nature, pale pink in color on labial aspect of 41, 42. Swelling was smooth painless and asymptomatic except for slight discomfort to the patient due to growth. On hard tissue examination there were traumatic occlusion with 41 and 11 with moderate plaque and calculus.

For surgical excision electrocautery was used and procedure was performed under local anaesthesia. After ensuring complete excision periodontal dressing is given for 7 days. Antibiotics and analgesics were prescribed for 3 days.

Based on histological report it was diagnosed as pyogenic granuloma.

Fig 2.1 pyogenic granuloma with 41,42

fig 2.2 immediately after excision

Fig 2.3 uneventful healing after 1 week

CASE 3

A 50 year old female patient reported with chief complaint of swelling in upper front region of jaw since 1year which was gradually increasing in size. Clinical examination revealed localized gingival swelling of 1.5 cm X 1 cm size, pedunculated in nature, reddish pink in color located on the edentulous area associated with 11, 21. Swelling was smooth painless and asymptomatic except for slight discomfort to the patient due to growth. On hard tissue examination there were irritation due to 32 with moderate plaque and calculus and moderate periodontitis with 13, 23, 32, 42.

For surgical excision electrocautery was used and procedure was performed under local anaesthesia. The growth was tied with suture at the base and then excision was performed. After ensuring complete excision periodontal dressing is given for 7 days. Antibiotics and analgesics were prescribed for 3 days.

Based on histological report it was diagnosed as pyogenic granuloma.

Fig 3.1 pyogenic granuloma in maxillary anterior region

fig 3.2 immediately after excision, hemostasis achieved using pause tablet and pressure pack

fig 3.3 uneventful healing after 1 week

Discussion

According to Vilmann et al, the majority of the pyogenic granulomas are found on the marginal gingiva with only 15% of the tumours on the alveolar part [7]. Studies by Zain RB et al., in Singapore populations have also shown the greatest incidence of pyogenic granuloma in the second decade of life [15].

Clinically pyogenic granuloma is generally seen as a smooth or lobulated exophytic lesion with a pedunculated or a sessile base. Pyogenic granuloma grows in size from a few millimetres to several centimetres in size but rarely exceed more than 2.5 cm. Many of the pyogenic granulomas grow rapidly and attain large sizes [16]. It has been reported many times that pyogenic granulomas may cause significant bone loss, [17].

Conclusion

The combination of precise removal and haemostasis achieved through electrocautery can minimise complications & promote optimal wound healing. Biopsy provised diagnostic accuracy through histopathological examination, while electrocautery offers therapeutic benefits.

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