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Original Research Paper

Pyogenic Granuloma of Buccal Mucosa: an Original Article

Medical Science

KEYWORDS : Pyogenic Granuloma, hyperplasia, granuloma pyogenerum, gingival; overgrowth, granulation tissue

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ABSTRACT

Pyogenic granuloma is a relatively common soft tissue tumor of oral cavity which is reactive and non neoplastic in nature.1

It is a benign localized mass of exuberant granulation tissue produced in response to local irritation or trauma.2 It might be related to hormonal changes. It is an inflammatory hyperplasia of oral cavity most commonly seen on gingiva. Predominantly seen in 2nd-3rd decade of life in females. Rarely it may present Extragingivally. Here we report a case of pyogenic granuloma on the buccal mucosa in a 44 year old male which is a very rare location for this leasion. clinical diagnosis was made and excision biopsy was done and patients was followed up for a period of 6 months for any recurrence.

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INTRODUCTION

Pyogenic granuloma is one of the most common benign tumors like proliferations affecting oral cavity.[3] Several authors consider Pyogenic Granuloma as an inflammatory hyperplasia that ulcerates. Ulceration can occur most commonly because of trauma during mastication following which the lesion becomes contaminated by the oral flora and liquids; as a result an acute inflammatory response occurs.[4]

Pyogenic granulomas typically occur on the mucosal surfaces, particularly the mouth and skin.[5] These lesions may be seen at any age and tend to occur more commonly in females than males. Pyogenic granulomas are commonly seen on gingival, particularly the anterior surface. Hormonal changes of puberty and pregnancy may modify the gingival reparative response to injury, producing what was once called a "pregnancy tumor". Under these circumstances, multiple gingival lesions or gingival hyperplasia may be seen. The lesions usually appear in second and third trimesters of pregnancy, most of which resolve soon after delivery.[6]

Clinically Pyogenic granulomas begin as small, red papules that rapidly increase in size ranging from a few millimeters to several centimeters. However, they rarely extend to more than 4 cm in diameter. Few cases have even caused displacement of teeth resulting in malocclusion.[7] These lesions can also present as asymptomatic, pedunculated, raspberry like nodules which on passage of time become ulcerateddue to secondary trauma. Initially the lesion may be covered by yellow, fibrous membrane or by epithelium of variable thickness. The lesions are delicate and minor trauma my cause considerable bleeding. Pyogenic granulomas may have an initial period of rapid growth, followed by stabilization and occasionally regression.

Clinically the differential diagnosis includes lesions with similar appearance such as peripheral gaint cell granuloma, peripheral odontogenic or ossifying fibroma, vascular lesions such as hemangioma and rarely metastatic carcinomas.

Purpose of study is to report an unusual case of extragingival pyogenic granuloma occurring on buccal mucosa of adult male. Such an atypical presentation like the case in discussion can be rather confusing and lead to erroneous diagnosis of other serious lesions such as hemangioma, kaposis sarcoma, squamous cell carcinoma, basal metastatic carcinoma and also successful management of the lesion.

Detail study

A 44 yr old male reported in our department with chief complaint of growth in the buccal mucosa on the left side initially it was a pea sized lesion in the buccal mucosa which gradually increased to the present size over a period of two months. It was associated with bleeding on chewing. Patient was addicted to 'jarda' (chewing tobacco) for past 20 years.

Clinical examination revealed a solitary, exophytic, red, pedunculated lesion measuring 2.5x1.5cm in size having lobulated surface situated on the left buccal mucosa. [fig.1] The lesion was firm in consistency, non tender, non compressible and no pulsations were seen. There were two or three bleeding points and the lesion bled on probing [fig1]. Provisional diagnosis of pyogenic granuloma was made. The patient did not have any systemic disease, his medical and dental histories were insignificant. The hemogram of the patient was within normal limits and oral hygiene was satisfactory. Patient was taken up for excisional biopsy with wide margins under local anaesthesia and histopathological examination was done.[Fig. 2] The histopathological findings showed stratified squamous epithelium with hyperkeratosis and acanthosis. The connective tissue stroma showed marked inflammatory cells consisting of neutrophils, plasma cells and lymphocytes. The lesion composed of proliferating capillaries arranged in lobular fashion. There was no evidence of malignancy. These findings were consistent with histopathological findings of pyogenic granuloma. The wound healed uneventfully and the patient was followed up for a period 6 months, no recurrence was found. [figure-3]

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Fig.1 Intraoral view Exophytic growth

Fig. 2 Immediate postoperative photograph after excision

Fig 3- 6 months post operative picture.

DISCUSSION

The incidence of pyogenic granuloma is between 26.8-32%.[8] In all reactive lesions age groups and in all population without any racial predilection. Size usually varies from few millimetres to few centimetres but not more than 2.5cm.

Pyogenic granuloma was first described by two French surgeons - ponset and Dor as Botryomycosis hominis.[9] Hartzell in 1904 first gave the name pyogenic granuloma.[10] The other names of pyogenic granuloma such as granuloma crocker, hartzell disease, Vascular epulis, haemangiomatosis epulis, Telangiectasia granulomatous, lobular capillary haemangioma, granuloma gravidarum or pregnancy tumor.

In oral cavity, Pyogenic granuloma shows striking predilection for gingival with interdental papilla being the most common site in 70%.The maxillary anterior area is more commonly involved. Extra Gingival pyogenic granulomas are more commonly seen in areas of frequent trauma. Poor oral hygiene may be the precipitating factor.[11]

Pyogenic granuloma occur in all ages but predominant in second decade of life in young adult females, possibly because of vascular effects of female hormones. Incidence is increased in pregnancy which is related to be due to increased level of estrogen and progesterone.[13] Some studies conclude initial traumatic conditions are main etiologic factors for the development of Pyogenic granulomas.[12]

Pyogenic granuloma usually appear as a localized solitary lump with sessile or pedunculated base and smooth or lobulated surface and is deep red or purplish in colour. Development of the lesion is slow, asymptomatic and painless but sometimes grows rapidly. Sometimes the surface may be ulcerated and friable, may be covered by yellow fibrinous membrane. Older pyogenic granulomas resemble fibromas due to more fibrous appearance.

Histologically it shows a connective tissue with distinct lobular arrangement with central larger vessels aggregates of well formed capillaries in the periphery. Clusters of polymorphonuclear leucocytes are present in some areas of granulation tissue, especially areas adjacent to necrotic or ulcerated surface. Neutrophils are present in the superficial zone of ulcerated pyogenic granulomas. Necrosis may be seen in association with surface ulceration.

In the present case the trauma and chemical irritation from the chewing tobacco (jarda) below the line of occlusion may have initiated the lesion.

As Pyogenic granuloma is a benign lesion, surgical excision is the treatment of choice. Other conventional surgical modalities for treatment of Pyogenic granulomas are cryosurgery, Nd : YAG,Co2 and flash lamp pulsed dye lasers have also been used. Recurrence rate of 16% have been reported. However recurrences after surgery of extra gingival pyogenic granuloma is uncommon. In our case there was no recurrence.

Conclusion – From the present case report it is concluded that pyogenic granuloma can be adequately treated with the correct diagnosis and proper treatment plan. Carefull management of the lesion also helps in preventing the recurrence of this benign lesion.

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