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Unusual representation of oral pyogenic granuloma in mandible mimicking malignancy: Report of two cases

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Abstract
Pyogenic granuloma is a common benign vascular tumour found to occur in all ages. Both skin and mucous membranes can be affected. Its most common aetiology is trauma, local irritants, microorganisms, plaque and calculus, etc. Histologically, the surface epithelium may be intact or may show foci of ulcerations or even exhibit hyperkeratosis. Gingiva is the commonly affected site in the oral cavity followed by buccal mucosa, tongue, etc. We are reporting two cases of pyogenic granuloma in young adults one in an 18 years old female and the other one in a 21 years old Male, they have an unusual presentation in the right posterior side of the jaw that resembled a malignant lesion.

Keywords: Pyogenic granuloma, unusual representation, benign reactive lesion

Introduction
Pyogenic granuloma (PG) also known as Granuloma telangiectaticum is a benign vascular tumour commonly seen in infants and children but can also occur in adults [1]. It is a soft tissue tumour of the oral cavity that occurs frequently and is thought to be reactive rather than malignant in nature. Since the disorder isn't linked with pus and doesn't histologically resemble a granuloma, the term "pyogenic granuloma" is misleading [2]. Pyogenic granuloma usually affects the gingiva and manifests as a nodular development that can grow quickly or slowly. There are three types of lesion progression: "early," "established," and "healing." The vascularity of the lesion in connection to its clinical history affects the lesion's colour, which also varies [3]. It is seen on the skin and mucous membranes, particularly on the tongue, lips, gums, and cheeks. The most common ways that PG manifests are from an ulceration, trauma, tiny wound, persistent irritation, or rough patches. Hormonal changes may also be connected to the onset of a gingival PG (puberty, menstruation, or pregnancy) [4]. The preferred course of treatment for these types of lesions is complete surgical excision with sub-periosteal curettage. Potential irritating elements must also be eliminated in order to prevent recurrence (plaque, overflowing restorations, etc.) [5]. Here we are reporting two cases of unusual massive pyogenic granuloma in the mandible that resembled malignant in origin.

Case 1
An 18 years old female patient reported in our department with the chief complaint of growth in the right posterior side of the jaw since, 2 months. Growth was initially small and it gradually increased to attain the present size. She also gave a history of mild discomfort and pain during speaking or while having food. She didn't take any medication or any treatment for the same before she visited us. On an intraoral examination revealed Pink, exophytic, pedunculated, non-tender growth of size measuring 5.2 x 4.5 cm in the posterior side of jaw extended from the distal aspect of 43 till the retromolar region anteroposteriorly. Growth was firm in consistency, non-fluctuant, non-compressible, and the overlying mucosa appeared smooth and shiny. Displacement of teeth w.r.t 41, 42, 43, was noticed. There was minimal bleeding on palpation and grade II mobility w.r.t 41, 42, 43, 44 & 45. Her oral hygiene status was not satisfactory as heavy calculus in the lingual aspect was seen. A Panoramic radiograph showed displacement of tooth w.r.t 41.42, 43, 44, 45 with the erosion of bone w.r.t 44 and 45. There was the presence of edentulous space w.r.t 46, 47. So, on correlating the history given by the patient and on clinical examination the provisional diagnosis was made as "Pyogenic

Granuloma". Incisional biopsy was performed and the specimen was sent for histopathological examination to confirm the diagnosis before the treatment. Histopathological examination showed superficial hyperparakeratinized stratified squamous epithelium showing hyperplasia and ulcerations at places. Underlying connective tissue showed profuse chronic cell infiltration and multiple small blood capillaries in a fibrous stroma. After confirming histopathological examination, Complete excision was performed under local anesthesia using electrocautery to avoid bleeding or surgical discomfort. Patient was advised to maintain her oral health and she is on continue follow-up and no recurrence is reported till now.

Case 2

A 21 year old male patient visited to us with a chief complaint of growth in the right posterior side of the jaw since, 1month. Growth was initially smaller in size and it gradually increased to attain the present size, causing difficulty in his speech and mastication. He also gave a history of mild pain associated with the growth. His medical and family histories were unremarkable and he didn't take any medication. On Intraoral examination revealed Bilobulated, soft to firm in consistency, reddish pink, dumbbell-shaped growth was present in the buccal and lingual aspect of the posterior right side of the jaw w.r.t 46,47. The Size of the growth present in the buccal aspect was measuring 2.5 x 2 cm and extended from the mesial aspect of 46 to the distal aspect of 47 and The Size of the growth present in the lingual aspect was measuring 3.5 x2.5 cm and extended from the distal aspect of 45 till the mesial aspect of 48 anteroposteriorly. Superiorly 2cm above the occlusal plane and inferiorly 0.5 cm above the lingual vestibular sulcus. The Surface over the growth appeared smooth, shiny, and pedunculated with well-defined margins. Some areas showed keratinization due to indentations lingually. Growth was non-tender, non-pulsatile, non-fluctuant & non-compressible. Minimal bleeding was present on palpation. There was moderate supragingival and subgingival calculus with moderate gingivitis. Grade 1 mobility was present w.r.t 46. The Patient's medical and family history was uneventful. Thus, on correlating the above features and history given by the patient a provisional diagnosis of Pyogenic Granuloma was made. A Panoramic radiograph revealed a localized interdental horizontal bone loss between 46 & 47. An Incisional biopsy was done and the tissue was sent for histopathological examination. Histopathological analysis confirmed the diagnosis. Complete surgical excision was performed under local anesthesia and to prevent the recurrence he was advised to clean his teeth twice daily and to take proper care of oral health. As of yet, no recurrence has been reported.

Discussion

An inflammatory hyperplasia that affects the oral tissues is called a pyrogenic granuloma. Most likely the earliest pyogenic granuloma described in English literature was Hullihen's in 1844. Though Hartzell originally used the term "pyogenic granuloma" in 1904 [6]. Hormonal variations, acute injury, and low-grade local irritation are identified to be the common causes of PG. Many of the patients may have predisposing factors including poor dental hygiene. Due to the vascular effects of female hormones, they are most prevalent in the second decade of life with a female predominance. Due to the deposition of calculus or foreign material in the gingival crevice, they are most frequently detected in the gingiva, which accounts for 75% of all instances. The tongue and buccal mucosa are the next most prevalent sites.[7] Radiographic Findings are usually absent. Few authors, however, came to the conclusion that long-standing gingival pyogenic granulomas occasionally led to localised alveolar bone resorption [8]. In general, the microscopic image of a pyogenic granuloma depicts exuberant granulation tissue covered by atrophic/hyperplastic epithelium that occasionally becomes ulcerated and reveals fibrinous exudates. The Presence of numerous endothelium-lined vascular spaces and the proliferation of fibroblasts and budding endothelial cells are the characteristic features of pyogenic granuloma [3]. The best course of action for treating this localised inflammatory lesion is to scale away any aggravating factors that may have been the cause, followed by surgical excision. Scalpel excision for symptomatic lesions was followed by sodium tetradecyl sulphate sclerotherapy, cryosurgery, and flash lamp pulsed dye laser. Particularly for highly recurrent lesions, intralesional injections of absolute ethanol and corticosteroids were successfully attempted [9].

Fig 1: Profile Picture of the Patient (Case 1)

Fig 2: Intraoral Picture (Case 1)

Fig 3: OPG radiograph showing displacement of tooth w.r.t 41.42, 43, 44, 45 with erosion of bone w.r.t 44 and 45

Fig 4: Profile picture of Patient (Case2)

Fig 5: Intraoral Picture (Case 2)

Fig 6: OPG radiograph showing a localized interdental horizontal bone loss between 46 & 47

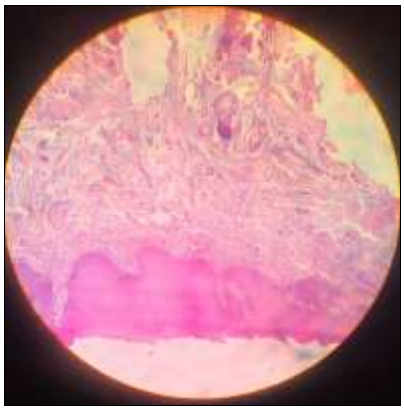

Fig 7: Photomicrograph under 10x (Case 1)

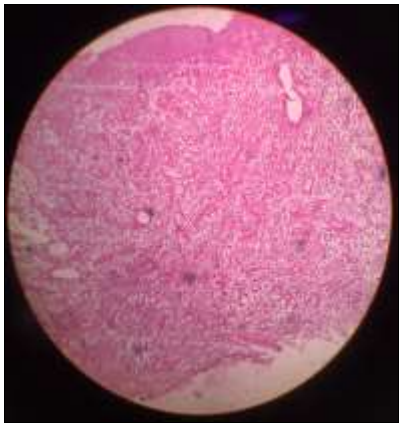

Fig 8: Photomicrograph under 10x (Case 2)

Conclusion

We reported two cases of pyogenic granuloma, both cases had a different appearance. Pyogenic granuloma is a commonly occurring reactive lesion in the oral cavity. We performed two different treatment modalities in both cases and the results were satisfactory in both cases. Thus, we made a conclusion that proper oral care and complete excision of the lesion can minimize the recurrence.

Conflict of Interest

Not available

Financial Support

Not available

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