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PYOGENIC GRANULOMA IN DECIDUOUS DENTITION: 2 RARE CASE REPORTS

Nikhil Srivastava, Priyadarshni Bhatia, Nudpur Kaushik, Ali Atif

Subharti Dental College Delhi, Haridwar Bypass Road, Meerut, UP India

Abstract

Pyogenic granuloma, is a reactive inflammatory hyperplasia which appears in response to various stimuli. Non neoplastic lesions account for 75.5% of cases with oral pyogenic granuloma being the most frequent lesion, accounting for 52.71% cases but in children this type of lesions are a very rare identity. This case report describes the clinical and histopathological features of mucogingival pyogenic granuloma, in a seven and five year old male patient. Excision was done with electrosurgery. The histopathological examination revealed lesion to be pyogenic granuloma.

Key words: Pyogenic granuloma, electrosurgery

Corresponding author: Dr. Priyadarshni Bhatia Email: priyaabhatia81290@gmail.com

Introduction

Pyogenic granuloma, also called as Granuloma pyogenicum is a reactive inflammatory hyperplasia which appears in response to various stimuli such as low grade local irritation and traumatic injury.[1] Recently it has been agreed that pyogenic granuloma arises as a result of some minor trauma to the tissues. The most common site of its occurrence is Gingiva , followed by buccal mucosa, tongue and lips.[2] The first case was reported in 1844 by Hullihen and the term pyogenic granuloma was coined in 1904 by Hartzell. However the term Pyogenic Granuloma is a misnomer as it is not related to any infection, does not contain pus and is also not a true granuloma.[3] Pyogenic Granuloma can affect a person of any age, has a wide range of occurrence between 18 to 39 years, but in children this lesion is rare.[4] This paper describes two case reports of pyogenic granuloma in Primary dentition of paediatric patients.

Case report I

A 7 year old male patient presented with a complaint of a growing mass in the upper left tooth region since 6 months. There was no history of associated pain with the lesion. On extraoral examination no visible swelling was observed. Intraoral examination revealed a sessile gingival overgrowth extending on the buccal surfaces of 62 and 63. It was bright red in colour and measuring approximately 1cm x 1cm. The lesion bled easily on slight provocation. Oral hygiene of the patient was poor and radiographically alveolar bone was normal. Routine blood examination was found to be normal and excision of the lesion was planned with electrocautery. After administration of local anaesthesia, the pedunculated mass was completely excised through the base of the lesion. After the excision of pedunculated mass, a dressing of coepack was applied over the raw area to prevent further infection. Antibiotics and analgesics were prescribed for 5 days. Patient was advised soft and cold diet and antiseptic mouthwash was prescribed to maintain oral hygiene. The excised tissue was sent for histopathological examination. Hematoxaline - Eosin staining section showed stratified squamous epithelium which was ulcerated and few areas replaced by a fibro-purulent membrane with an

underlying fibro cellular connective tissue stroma. The stroma showed numerous small and large proliferating endothelium lined channels engorged with RBCs, intense mixed inflammatory cell infiltrate and areas of hemorrhage, confirming the lesion as pyogenic granuloma. The area showed normal healing in the follow up visit.

Figure 1 (a-c) a. lesion in respect to 62,63 b. after excision of the lesion c. application of coe pack

Case report II

A 5 year old boy reported with the chief complaint of growing tissue mass in the right back tooth region. The tissue started growing on its own since one month to the present dimension. The tissue was painless and bled during tooth brushing and occasionally on its own. On intraoral examination a red coloured soft tissue mass of the dimension 1cm X 1cm was present on the lingual aspect of 84 and 85. The lesion was provisionally diagnosed as pyogenic granuloma and after routine blood examinations it was decided to excise the lesion with electrosurgery and excised tissue was sent for histopathological examination which showed numerous endothelium lined vascular channels, inflammatory cell infiltrate mainly consisting of plasma cells and lymphocytes confirming the lesion as pyogenic granuloma. The patient was followed up at 1 week interval and showed normal healing.

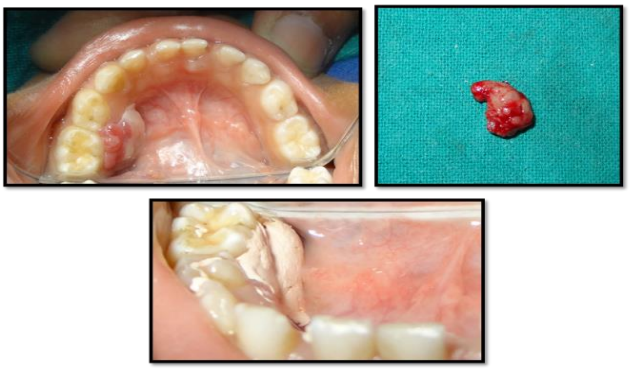

Figure 2 (a-c) a. lesion in respect to 84, 85 b. excised tissue c. coe pack after excision

Discussion

In an analysis of 244 cases of gingival lesions in south Indian population, Shamim *et al*. found that nonneoplastic lesions accounted for 75.5% of cases with oral pyogenic granuloma being most frequent lesion, accounting for 52.71% cases[5] but in children this type of lesion is a very rare identity.[4] It is now universally agreed that this lesion is formed as a result of exaggerated localized connective tissue reaction to a minor injury or any underlying irritation.[2] These irritating factors can be calculus, poor oral hygiene, nonspecific infection, over hanging restorations, cheek biting etc. Because of this irritation, the underlying fibrovascular connective tissue becomes hyperplastic and there is proliferation of granulation tissue which leads to the formation of pyogenic granuloma.[6,7] Pyogenic granulomas generally are soft, painless, and deep red to reddish-purple in color.[1] They grow in size from few mm to several cm in size but rarely exceed more than 2.5 cm size. Some of the pyogenic granuloma grow rapidly and attain large size.[8] Pyogenic granuloma is partly or completely covered by parakeratotic or non-keratinized stratified squamous epithelium. Major bulk of the lesion is formed by a lobulated or a non-lobulated mass of angiomatous tissue. Usually, lobulated lesions are composed of solid endothelial proliferation or proliferation of capillary sized blood vessels. The amount of collagen in the connective tissue of pyogenic granuloma is usually sparse.[1]Radiographic findings are absent in pyogenic granuloma.[9] Excision and biopsy of the lesion is the recommended line of treatment unless it would produce a marked deformity and

in such a case incisional biopsy is recommended.[11] Conservative surgical excision of the lesion with removal of irritants such as plaque, calculus and foreign materials is recommended for small painless non-bleeding lesions. Excision of the gingival lesions up to the periosteum with thorough scaling and root planing of adjacent teeth to remove all visible sources of irritation is recommended.[12] Bhaskar and Jacoway has reported recurrence rate of 15.8% after conservative excision.[1] Various other treatment modalities such as use of Nd: YAG laser, carbon dioxide laser, flash lamp pulse dye laser, cryosurgery, electrodessication, sodium tetradecyl sulfate sclerotherapy[2] and use of intra lesional steroids[8] have been used by various clinicians.

Differential diagnosis

Peripheral giant cell granuloma(PGCG) is an exophytic lesion that is seen exclusively in gingiva and is clinically similar to pyogenic granuloma (PG) but PGCG is more often bluish purple compared to bright red of a typical pyogenic granuloma and also PGCG is more likely to cause bone resorption.[2]Pyogenic granuloma varies in texture and can also be suggestive of fibroma such as peripheral odontogenic or ossifying fibroma, although they tend to be lighter in colour. Also pyogenic granuloma is usually 1.5cm in diameter.[2]Another important differential diagnosis of pyogenic granuloma is hemangioma which is a developmental disorder. Most hemangiomas are located on tongue[2] and in comparison to pyogenic granuloma, hemangioma has more plump, histiocytoid, endothelial cell infiltrate without an acute inflammatory cell infiltrate.[13]

Conclusion

Pyogenic granuloma or granuloma pyogenicum is a well-known oral lesion. Pyogenic granuloma arises in response to various stimuli such as low grade local chronic irritation, traumatic injuries, sex hormones or certain drugs, so to remove the causative agent should be the major aim of the treatment to avoid reoccurrence.Pyogenic granuloma can be adequately treated with early diagnosis and prompt treatment. A careful management of the lesion also helps prevent the recurrence of this benign lesion.

References

1.Bhaskar SN, Jacoway JR. Pyogenic granuloma clinical features, incidence, histology and result of treatment: report of 242 cases. J Oral Surg. 1966; 24: 391-99.
2.Jafarzadeh H, Sanatkhani M, Mohtasham N. Oral pyogenic granuloma: a review. J Oral Sci. 2006;48(4):167-75.
3.Mubeen K, Vijayalakshmi KR, Abhishek RP. Oral pyogenic granuloma with mandible involvement: an unusual presentation. J Dent Oral Hyg. 2011; 3: 6-9.
4.Pilch BZ Head and Neck Surgical Pathology 2001. Lippincott Williams and Wilkins,Philadelphia;389-390.
5.Shamim T, Varghese VI, Shameena PM, Sudha S. A retrospective analysis of gingival biopsied lesions in south Indian population: 2001-2006. Med Oral Pathol Oral Cir Bucal. 2008;13:414–8.
6.Kerr DA. Granuloma pyogenicum. Oral surgery, oral medicine, and oral pathology. 1951;4(2):158. 5.
7.Hartzell M. Granuloma pyogenicum J Cutan Dis. 1904;22:520-3.
8.Parisi E, Glick P, Glick M. Recurrent intraoral pyogenic granuloma with satellitosis treated with corticosteroids. Oral Diseases. 2006;12(1):70-2.
9.Angelopoulos AP. Pyogenic granuloma of the oral cavity: Statistical analysis of its clinical features. J Oral Surg. 1971;29:840–7.
10.Fowler EB, Cuenin MF, Thompson SH, Kudryk VL , Billman MA. Pyogenic granuloma associated with guided tissue regeneration: a case report. J Periodontol. 1996 Oct;67(10):1011-5.
11.Steelman R, Holmes D. Pregnancy tumor in a 16-year-old: Case report and treatment considerations. J Clin Pediatr Dent. 1992;16:217–8.
12.Neville BW, Damm DD, Allen CM, Bouquot JE. 2nd ed. Philadelphia: Saunders; 2002. Oral and Maxillofacial Surgery; pp. 447–9.
13.Nirmala SVSG, Vallepu R, Babu M, Dasarraju RK. Pyogenic Granuloma in an 8 Year Old Boy - A Rare Case Report. J Pediatr Neonatal Care 2016;4(2):132-5.

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