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Pyogenic Granuloma-A Case Report

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Abstract: ***PG (Pyogenic granuloma) represents as a isolated pedunculated or sessile growth that can mislead diagnosis of cases, and can also lead to exhausted treatment modalities. Refractory swellings in the oral cavity can lead to misinterpretation of simple cases and relaxed approach to complex cases. Proper medical history is paramount for successful treatment protocols. A 28 year old female patient was refered for a comprehensive gingival and periodontal evaluation. Patient had made number of visits to clinics in a period of 18 months for examining a growth which was bothering her and bled on the slightest touch. The patient was treated and put on a follow up for a period of 12 months for possible recurrence. Management of such cases require proper history which includes personal history, habits, drug history and medical history. Any information which might seem less relevant will lead to a change in treatment plan.All data needs to be evaluated for proper diagnosis and treatment plan.***

Keywords: Pyogenic granuloma, epulis, peripheral ossifying fibroma, refractory gingival growth

1. Introduction

Pyogenic granuloma (PG) is a commonly occurring vascular,benign lesion occurring in the skin and oral cavity. It was described by Hartzell in 1904 [1]. The condition is a misnomer as it is neither bacterial or granulomatous in origin [2]. Bleeding is a common problem associated with this lesion. The etiology for the condition is misleading. The lesion can be categorized into three entities (i) cellular (ii) vascular and (iii) involuntary [3]. Slow fibromatous growth is seen in untreated cases after a extended period [4]. Numerous treatment modalities exist to treat PG cases such as excision, curettage and laser ablation [5].

2. Case Report

A 28 year old female patient was refered to the clinic for a comprehensive gingival and periodontal evaluation. Her complaint was a swelling in relation to her upper right gums. On clinical examination, the swelling looked haemorrhagic and fluctuant. Patient was asked a detailed medical history,dental history and habits if any, she had. Blood profiling was done to rule out the possibility of any haematologic disorders. Patient was also asked to visit a gynaecologist to evaluate her hormonal profile. The patient reported with her hormonal tests and it was seen that her FSH (follicle stimulating hormone) levels were 19 mIU/ml. On further evaluation, patient mentioned that she was on oral contraceptives Tablets (Active ingredient-2mg Cyproterone acetate 35 mgs ethinyloestradiol),mentioning that she was taking the tablets for the past 18 months not daily,but quite regularly. She had stopped the drug and was now taking folic acid.Patient was informed about the possible side effects of the drug and its relation with the swelling she was having in her gums. Routine prophylaxis was done and the persisting growth was removed using a diode laser 980nm (Denmat) with a 400 um fiber tip under Local anaesthesia. The tissue sample was sent to the lab for investigation. Lab report showed the presence of vessels in lobular aggregates, with blood vessels of diminished diameter and proliferating, also the presence of perivascular mesenchymal cells. The report narrowed the diagnosis to be of pyogenic granuloma. The patient was informed about the result and asked to report every three months for followup.

Figure 1: Gingival growth as reported by the patient

Figure 2: Growth excised with diode laser 1

Figure 3: Followup after 1 year

3. Discussion

"Human Botromycosis" was the term first used to identify this growth. It was reported by Poncet and Dor [6]. Low grade irritation, trauma, hormonal imbalances play a major role in the etiology of the lesion [7,8]. The lesion is usually slow growing, painless and ranges from a few millimeters to sometimes large in diameter which can interfere with normal function. The colour varies from bright red if highly vascular to pink, brown and greyish brown in colour depending on the length of time it tends to persist in the oral cavity [9].It occurs in the oral cavity in various regions as in palate, lips, buccal mucosa and more rarely on the tongue region [10].Changes in oestrogen progesterone levels as well as differences in levels of LH (leutinizing hormone),FSH(follicle stimulating hormone play an important role in varied growth presentation in the oral cavity [11]. Histopathologically, pregnancy tumor resembles pyogenic granuloma and it is seen more commonly in the second and third trimester [12].Pyogenic granuloma has been described as two entities LCH(lobular capillary hemangioma) and non LCH(non-lobular capillary hemangioma) [13,14].The present case showed growth to be about 1cm in diameter. Histopathologically, it revealed a discontinuous epithelium and presence of connective tissue septae formation [15].The lesion resembled a LCH variety as it demonstrated a reactive lesion. Pyogenic granuloma needs to be differentiated from other lesions resembling similar pathology namely kaposissarcoma, peripheral ossifying fibroma, oralfibroma, giant cell granuloma. In most of these lesions, the vascular component is not very prominent except in kaposis sarcoma. Most of the lesions with a proliferative and vascular component with a high degree of inflammatory component tend to be pyogenic granuloma. Localizing the diagnosis needs to be done histopathologically before treatment is instituted.

4. Conclusion

Pyogenic granuloma is a common entity which is usually found during routine oral examination and also as a finding which patients report due to inability to perform routine tasks. It is a slow growing lesion which tends to occur in areas of the oral cavity and also resembles growth similar to other pathology. Proper case history which includes patients personal history, medicationhistory, habity, systemic issues needs to be evaluated before starting a treatment plan. Patient should be advised a histopathological examination before consideration of any treatment modalities.

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Author Profile

Dr Sudhir Varma received his Bachelor of dental surgery and masters in periodontics from Mangalore University, Karnataka, India in 1993 and 1997 respectively. He was appointed as a reader in AB Shetty dental college in the dept of periodontics from 1997- 98,following which he went to Dubai,UAE in 1998 and joined private practice. He is currently Assistant professor in periodontics at Ajman University of science and technology and a specialist periodontist at Dr Mohd Rafi dental clinic at Dubai, UAE. He has taken Fellowships in Laser dentistry from University of Genoa, Italy and also has standard proficiencies in diode,CO2 and erbium wavelengths. His area of research interest is lasers in periodontics and surgical periodontics.