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Case Report

Isolated gingival overgrowths: Case report

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ABSTRACT

It is considered that the pyogenic granuloma is a frantic tissue reaction to local irritation or damage. These lesions usually appear as a single nodule or sessile papule with a smooth or lobulated surface. These are available in a range of sizes ranging from a few millimetres to many centimetres. Pyogenic granuloma of the oral cavity is said to affect the gingiva 75% of the time. It may appear extraterrestrially on occasion. We present a case of Pyogenic granuloma in a 22-year-old man's lower jaw, which is a common location for this lesion.

1. Introduction

Localised hyperplastic gingival lesions, or "Epulides," as they are generally known, have been recognised for decades. The term "epulis" is derived from the Greek word "epi" and "elon," which mean "on the gingiva. As a result, this phrase can theoretically be used to describe the clinical appearance of any gingival lesion. This word, however, has no information about the type of the lesion.[1,2]

The most prevalent type of oral tumorlike development is pyogenic granuloma. While the name suggests a benign tumour, most, if not all, fibromas are reactive localised fibrous hyperplasias caused by trauma or local irritation. Although the phrase "focal fibrous hyperplasia" captures the clinical appearance and pathology of this entity more correctly, it is not often used.

The term "pyogenic granuloma" is deceptive because the lesion lacks pus and hence is not a granuloma. Trauma causes one-third of the lesions, and poor dental hygiene may also play a role.[3,4] It frequently manifests as a painless, pedunculated, or sessile gingiva lump.

It is a malignant tumor-like formation of the mouth cavity (often detected around the anterior teeth) or skin. It is typically caused by a variety of stressors, including low-grade local irritation,[5] acute injury, hormonal factors,[6] and some medications.[7]

Because it is a non-neoplastic growth, excisional therapy is the preferred treatment; however, cryosurgery, excision by Nd:YAG laser, flash lamp pulsed dye laser, injection of corticosteroid or ethanol, and sodium tetradecyl sulphate sclerotherapy have all been shown to be effective. The scalpel blade is the traditional method of surgical excision of epulides.However, in dentistry, electrosurgery has been utilised for soft tissue operations like as gingivectomy, gingivoplasty, soft tissue growth excision, crown lengthening, and so on since 1928.[8] It has a coagulative effect, allowing for a clear, bloodless vision of the operating field. It is offered with a variety of angulated points, allowing for easy cutting.[9]

2. Case Report

A 22-year-old male patient presented to the department of periodontology at K.D Dental College and Hospital Mathura with the major complaint of gum swelling in

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the lower back region of the jaw that had been persistent for three months (Figure 1). On clinical examination, a 3cm X 2cm gingival enlargement with evident evidence of inflammation was detected in relation to 32,33. The lesion was hard in consistency, with haemorrhage on probing. The medical history of the patient was unremarkable. First and foremost, full mouth scaling and root planning were performed. After the irritation had subsided for around 10 days, surgery to remove the lesion was planned. Following local anaesthesia, the lesion was excised using a 15 no. B.P. blade up to the lesion's base (Figures 2 and 3). To avoid the recurrence of the lesion, it was guaranteed that it was entirely removed. For one week following the excision, a periodontal dressing was used. For one week, antibiotics and analgesics were provided. Postoperatively, the patient was examined on a weekly basis to ensure appropriate oral hygiene in the surgery area. At three-month follow-up, the gingival tissues were healthy, with successful healing and no recurrence.

Fig. 1: Swelling of 3cm X 2cm in size

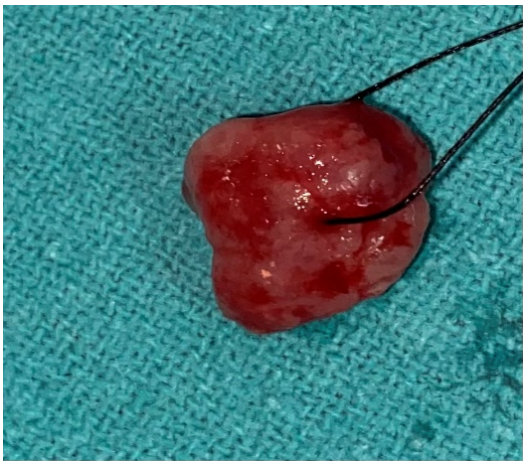

Fig. 2: Excision of lesion

Fig. 3: Post operative

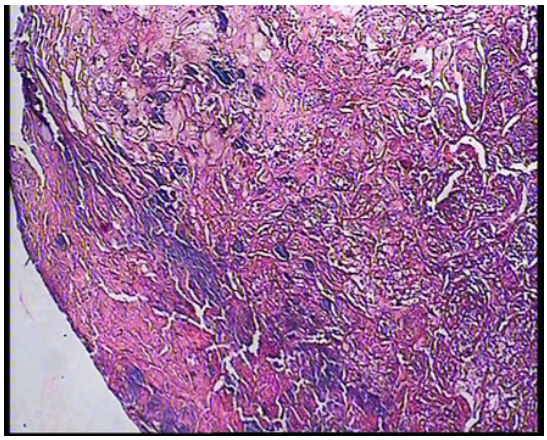

Fig. 4: Thick connective tissue containing a high concentration of mature collagen

3. Discussion

Pyogenic granuloma is a kind of oral inflammatory hyperplasia. Hullihen's 1844 description of pyogenic granuloma was almost certainly the first in the English literature. Hartzell used the term "pyogenic granuloma" for the first time in 1904.[10] This lesion is now widely believed to be the result of an overly localised connective tissue reaction to a minor injury or other underlying irritation.[9] Irritating reasons include calculus, poor dental hygiene, nonspecific infection, overhanging restorations, cheek biting, and other issues. The underlying fibrovascular connective tissue becomes hyperplastic as a result of the irritation, and granulation tissue proliferates, leading in the creation of a pyogenic granuloma.[11] Pyogenic granuloma can occur at any age, but it is most common in young adult females in their second decade of life, presumably because to the vascular effects of female hormones.[12] The gingiva is the most common location of infection, followed by the buccal mucosa, tongue, and lips.[10] When a pyogenic granuloma is excised together with its base and all of the causal elements are eliminated, it does not return. This study describes the surgical treatment of a pyogenic granuloma·

The bulk of pyogenic granulomas, according to Vilmann et al, are found on the marginal gingiva, with just 15% of tumours occurring on the alveolar portion.[4] According to Zain RB et al., the incidence of pyogenic granuloma is highest in the second decade of life in Singapore populations.[13]

In addition to pyogenic granuloma, the differential diagnosis includes peripheral giant cell granuloma, peripheral ossifying fibroma, hemangioma, kaposi's sarcoma, bacillary angiomatosis, non-Hodgkin's lymphoma, angiosarcoma, and metastatic malignancy. The presence of bone resorption and the development of multinucleated giant cells distinguish peripheral giant cell granuloma from Pyogenic granuloma clinically.

The consistency, texture, and lighter colour of peripheral ossifying fibroma separate it from other types. Hemangioma is a developmental condition that most typically appears on the tongue. It has the potential to be multinodular and bluish red in colour. A chairside "Diascopy" procedure can quickly diagnose them. Because they are both AIDS-related and have distinct histological features, Kaposi's sarcoma and bacillary angiomatosis can be distinguished. A gingival non-Hodgkin's lymphoma is typically discovered as an asymptomatic gingival enlargement or mass mimicking a pyogenic granuloma that requires histological confirmation to be diagnosed.[14]

Pyogenic granuloma is frequently diagnosed as a smooth or lobulated exophytic lesion with a pedunculated or sessile base. Pyogenic granuloma can range in size from a few millimetres to several centimetres, but seldom exceeds 2.5cm. Many pyogenic granulomas develop rapidly and in huge numbers.[15]

A full surgical excision is required to treat pyogenic granuloma. Pyogenic granuloma recurrence after excision is a known consequence that can be avoided. Because pyogenic granuloma is said to recur in 16% of treated lesions, such lesions may require re-excision.[16]Pyogenic granuloma must be recognised from other benign soft tissue lesions. Examples include peripheral giant cell granuloma, pregnancy tumour, and typical granulation tissue.[10–12]

It has also been noted that numerous studies have examined various treatment modalities, including cryosurgery; flash lamp pumped pulsed dye laser, and traditional surgical excision, with high rates of success and low rates of relapse. Nevertheless, it must be remembered that surgical excision can be carried out in a single session using standard surgical equipment, as opposed to alternative treatments that need for multiple sessions as well as specialized knowledge and methods. Surgical excision method is simple to use in routine clinical practice, which increases patient comfort. Numerous studies have also evaluated alternative treatment techniques, including cryosurgery, flash lamp powered pulsed dye laser, and classic surgical excision, with high rates of effectiveness and low rates of relapse. However, it should be noted that surgical excision can be performed in a single session using ordinary surgical equipment, as contrast to other treatments that require many sessions as well as specialised knowledge and methodologies. In ordinary clinical practise, the surgical excision procedure is simple to employ, which promotes patient comfort.[17]

Differentiation based on clinical and histological criteria aids in the provision of appropriate treatment and, as a result, a favourable prognosis. Histologically, the surface epithelium may be intact, contain ulcerations, or show hyperkeratosis. It is supported by a dense connective tissue mass including a substantial amount of mature collagen (Figure 4). With proper diagnosis and treatment planning, pyrogenic granuloma can be effectively treated. A correct lesion therapy also benefits in the prevention of recurrence.

4. Conclusion

We can deduce from the presentation of this case report that the interaction of several etiological components caused the inflammatory tissue to pass the threshold from normal gingivitis to granuloma development. Because nerves do not grow within reactive hyperplastic tissue, the lesion was painless. Surgical excision is a tried-and-true approach of reducing lesion recurrence. As a result, precise diagnosis and treatment planning are required. To protect and improve the mucogingival complex, the lesion should be managed with care.

5. Conflict of Interest

None.

6. Source of Funding

None.

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