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Epulis –Case Report

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Abstract

The term epulis was derived from a Latin word, epoulis.The epulis is the most frequently encountered benign lesion of the oral cavity. epulis is a rare tumour of the newborn, also known as granular cell tumor of the newborn or Neumann' tumour. the possible origin is the periosteum and periodontal ligament. Etiological factors that lead to its development are local irritations such as poor-quality dental restoration, dental plaque and calculus The lesion is most common in females and also its was most commonly seen in the maxilla than mandible.

Keywords: Epulis, Angio granuloma, pyogenic granuloma.

Introduction

The epulis is the most frequently encountered benign lesion of the oral cavity. the term epulis was first introduced by virchoff in 1864. the name derives from the ancient Greek word 'epoulis' and is a specific clinical term that means 'growth on gums. 1The lesion is most common in females, with a female-to-male ratio of 8:1, and is more common in the maxilla than the mandible (3:1).2Based on their Histopathological findings epulis has been classified under the following four headings: fibrous, granulomatous (pyogenic granuloma), angiomatous and peripheral giant cells epulis. Fibrous epulis usually presents as a firm pink, uninflamed mass, and it usually tends to grow from below the free gingival margin/ interdental papilla. this patient is usually asymptomatic in most cases. Pain may occur secondary to trauma. Histologically, the fibroma may show the additional focus of calcification foci of cementicles. Angio granuloma and pyogenic granuloma presents in adults as smooth surfaced mass, often ulcerated and grows from beneath the gingival margin. These epulides are highly vascular, can be compressed

on palpation and bleed easily. During the initial period, these epulides tend to grow easily and very rapidly. she mass may penetrate interdentally and present as bilobular (buccal and lingual) mass connected through the col area, but bone erosion in un common. When Angio granuloma appears during pregnancy they are called pregnancy epulis / tumour or granuloma gravidarum. Peripheral giant cell granuloma occurs particularly in anterior region in young patients or in the posterior mouth during mixed dentition phase and in adults. These purplish-red colour of the epulis is due to high vascularity often causing them to bleed.

Case Report

A 23-year-old female patient reported to the department of oral medicine and radiology with a chief complaint of an intra-oral swelling over right side of the lower front tooth region for past 20 days. The history of presenting illness was reported to be swelling was initially small in size by the patient at the onset which gradually increased in size to attain the present size. On intraoral examination, on inspection small a solitary, well-circumscribed, oval-shaped soft tissue swelling measurement was done by using university of North Carolina (UNC 15) probe (LX B= 0.5 x 1.5mm) in its diameter (figure C & D) with a smooth, shiny surface and having a slightly pinkish hue, was present in relation to the lower right front tooth region. Swelling extending from anteri oposterioly distal surface 42 to distal surface of 43 region and superior inferiorly from labial vestibule to marginal gingiva with respect 42 to 43. The swelling was painless and minimal amount of calculus was noted. (Figure A &B). On palpation, all the inspectory findings were confirmed. The well-defined localized gingival growth which was firm in consistency, Base of the swelling is sessile, non-tender, non-fluctuant and clinically slip sign negative. there was bleeding on palpation. The temperature of the overlying surface was normal and the associated lymph nodes of the region were non-palpable. The patient had no significant medical, dental, family history. Extra-oral examination revealed no remarkable findings. There was no difficulty in speaking or chewing. No other oral anomalies were detected. Based on above history and clinical examination of the patient, a provisional diagnosis of epulis on right lower front tooth region was arrived-at while the important differentials included a granulomatous (pyogenic granuloma), irritational fibroma, lipoma and hemangioma. For making the differential, the relatively, well-known and simple, clinical slip sign for lipomas and diascopy procedure for lesions of vascular origins including hemangiomas was performed and were found to be negative. The patient was, thus, advised to excisional biopsy of the lesion along with the removal of the affected adjacent minor salivary gland tissue. The lab investigations like complete blood count were conducted and the values were found to be normal. A written, informed consent was obtained from the patient's parents. Removal of the lesion was performed under local anesthesia by using surgical scalpel. Local anesthesia was administered around the lesion. In this case, local anesthesia of 1.8 ml Lidocaine with 1:100,000 epinephrine, was administrated through the local infiltration on the lower right front tooth region. Before infiltration, a topical anesthetic gel for 2 minutes was applied. The lip was then everted with digital pressure to increase the lesion's prominence. The tip of surgical scalpel was directed to the surface of the lip at the base of the lesion at an angle of 10 to 15°. Movements were performed around the base, while the epulis was grabbed by Tissue forceps used (Figure E). The site was slowly and continuously mopped by sterile wet gauze to avoid bleeding and

infection. Care was taken also to always control the tip. If upon inspection, any damage or collection of debris was observed during treatment, the tip surgical scalpel was cleaned with a sterile gauze. The perfect way to oblige the lesion for minimally invasive treatment was by circular motion surrounding the lesion. Minor salivary glands around the lesion were also excised to prevent a recurrence (Figure F & G) The epulis was totally removed in 5 minutes. No bleeding was observed in the operative site and no sutures were necessary. An analgesic was prescribed for 5 days and post-operative instruction was given. Follow up of was taken after 15 days. No any evidence of recurrence of the lesion. The excised tissue was submitted to the pathological investigations which confirmed the diagnosis and ruled out the minor salivary gland tumors. The specimen was sent for his to pathologyc analysis which identified The cytoplasmic granules were PAS (Periodic acid-Schiff) positive. Immunohistochemically, the tumor cells were diffusely positive for vimentin, and negative for S-100 protein, actin and desmin. These findings was confirmed the diagnosis as epulis on lower right front tooth region. The patient was recalled after 1 week for suture removal.

Fig [A & B]: (A) picture of patients (B) Solitary, well-circumscribed, ovalshaped swelling largest diameter with a smooth, shiny surface and having a slightly pinkish colour present in relation to the lower right front tooth region.

Fig C & D: Measurement was done by using university of North Carolina probe (LX B=0. 5 x 1.5 mm)

Fig (E): Excision of the lesion using surgical scalpel, with a Coagulant setting and with epulis grabbed by Tissue forceps .Fig (F) : excision done

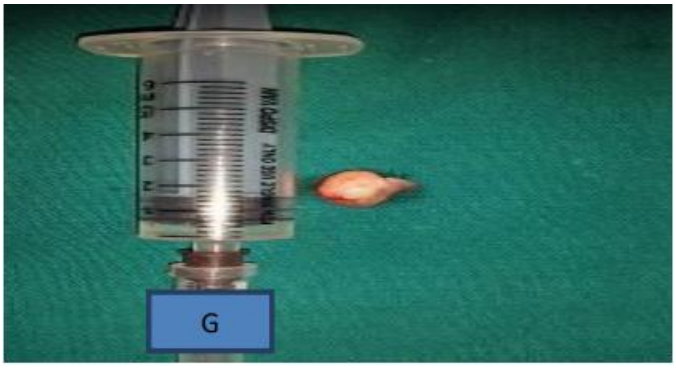

Fig G: grossing it is a single bit tissue approximately 0.5x1.5 cm in size ovoid in shape reddish pinkish in colour with smooth in surface texture.

Discussion

Epulis is a localized gingival growth, typically starting in the interdental papillae. The lesions which contain relatively little vascularity are focal fibrous hyperplasia and peripheral ossifying fibroma which are pink, smooth surfaced elevations that are usually asymptomatic. (1) Those lesions which contain numerous vascular spaces (pyogenic granuloma and peripheral giant cell granuloma) are usually red smooth surfaced elevations and the degree of trauma to which they are subjected is

often sufficient to cause focal ulceration and pain. (2) The histopathology reveals large number of multinucleated giant cells in vascularized fibro cellular stroma. In some cases, the giant cells may be found in lumen of Capillaries. Hemorrhage, hemosiderin pigment, inflammatory cells & newly formed bone or mature calcified material throughout the cellular stroma can be seen. Lesion may be covered by stratified squamous epithelium and ulcerated in some cases. (3)

Table 1:

Age and Sex	The lesion is most common in females, with a female-to-male ratio of 8:1,
Site	more common in the maxilla than the mandible (3:1).
Symptom	Painless but pain occur secondary to trauma
Size	0.5-1.5 mm
Shape	Round or oval
Appearance	Bilobular mass, bony erosion

Treatment for epulis include surgical excision, marsupialization, micro marsupialization, electrocautery, intralesional steroid injection of corti costeroid, cryo surgery, irradiation, laser vaporization, and laser excision [7]. The most common treatment is complete removal of the lesion surgical excision. Marsupialization had resulted in considerably higher recurrence rates. Micro marsupialization had been suggested to have lower recurrence rates, although it was restricted to lesions with clinical characteristics that Strongly suggested a diagnosis of epulis since Histopathological examination was not possible. Cryosurgery yielded satisfactory results with no recurrence. (8)

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