

ENORMOUS EPULIS: A CASE REPORT WITH ATYPICAL PRESENTATION IN A MALE PATIENT

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ABSTRACT

INTRODUCTION

Epulis is a term used clinically to describe a variety of benign gingival swellings often arising from the interdental papilla due to local irritation. While generally non-aggressive, their presentation can vary. It has known to have no degenerative potential.

CASE REPORT

We present a case of a 31-year-old male patient who presented to us with a unusually large, pedunculated, mobile, non-ulcerated painless mass located on the left maxillary alveolar ridge. This lesion was noticed 15 days prior to presentation and had grown progressively. It was attached to the gingival surface by thin pedicle and surgically resected under local anaesthesia. The histological examination showed fibro collagenous stroma with diffused mixed inflammation infiltrate consistent and suggestive of epulis. There was no evidence of recurrence or residual lesion during 1 year follow-up after surgery.

CONCLUSION

This case is noteworthy due to the unique dimensions of the lesion and its occurrence in a male patient, which contrasts with the typically observed female predominance seen in these lesions. This case report highlights the importance of considering epulis in the

differential diagnosis of gingival masses, even when they present with atypical characteristics, and contributes to a better understanding of the lesions' diverse clinical presentation.

KEYWORDS

Epulis, Pedunculated mass, Gingival disease

INTRODUCTION

Jaw bones can be affected by site specific tumors namely epulis and odontomes. Tumours arising in relation to the alveolar process are named epulis and those originating in the embryological components of the developing teeth are called odontomes.¹ Soft tissue lesions in the oral cavity are secondary to two mechanisms namely reactive hyperplasia or neoplasia. Majority of such localized overgrowths in the oral cavity are reactive lesions than neoplastic, that develop in response to chronic and recurring tissue injury leading to excessive tissue response.² Epulis is a relatively frequent benign lesion of the oral cavity.³ These lesions are usually asymptomatic with a variable growth rate.³ The term epulis is derived from the ancient Greek and is a clinical term having topographic meaning indicating a lesion located over the gingiva seen more commonly in females, reasons of which remain unclear. ^{4,5} It usually presents as a single pedunculated lesion arising from the gingival surface. It is indolent in nature with variable

dimensions, colour and consistency. The pathogenesis is not unclear but seems to be related to multiple factors in which a key role in mechanism is due to the reactive inflammatory component that determines its action on cells within the periodontal ligament. Poor oral hygiene seems to be an important predisposing factor.⁶ Based on current literature there are four types of epulis based on the prevalent histological component: fibrous, granulomatous, angiomatous and giant cell.⁷ Histologically, intact lesion consists of bundles of collagen fibres covered with keratinized squamous cell epithelium. When traumatized, the lesion contain inflammatory infiltrate and area of ulceration area covered with fibrin and organisms from the oral flora.⁸ The fibrous epulis usually appears in the interdental papilla as the result of local irritation (calculus, bacterial plaque, caries or restorations with irregular margins).⁸ We hereby present an interesting case of a giant epulis lesion arising from the gingival surface of the superior maxillary alveolar ridge in a middle aged male patient which is unusual presentation of a reactive condition which poses to be a diagnostic dilemma for the clinician.

CASE REPORT

A 31-year-old male patient presented to our institution with a chief complaint of swelling in the oral cavity. The patient reported that the lesion had started insidiously 15 days prior and had progressively increased in size. He also complained of progressive dysarthria and dysphagia to solids, likely due to the mass effect of the lesion. A history of chronic tobacco chewing since young adulthood and poor oral hygiene were noted.

Clinical examination revealed a firm, mobile, non-ulcerated, pedunculated mass locate on the left superior maxillary alveolar ridge. The

lesion measured 5 x 4 x 3 cms and had regular surface, did not bleed on touch. It was freely mobile, anchored to the gingiva via a thin pedicle and was painless on palpation. (Fig 1A & B) There were no palpable cervical lymphadenopathy observed. Clinically the mass exhibited features of a benign tumour.



Figure 1. (A & B) Preoperative clinical photographs of the patient showing globular pedunculated mass with a thin pedicle arising from superior maxillary alveolar ridge.

The lesion was completely resected under local anaesthesia using bipolar electrocautery to sever its thin pedicle. Meticulous haemostasis was achieved. Following excision, the underlying alveolar ridge where the pedicle was anchored appeared homogenous and healthy. Gross examination of the resected lesion on cut surface, showed haemorrhagic and necrotic area. Microscopic examination showed hyperkeratotic, hyperplastic stratified squamous epithelium, edematous fibro collagenous stroma with diffused mixed inflammatory infiltrate which was suggestive of epulis. (Fig 2) On follow up for 1 year post operatively patient is having an uneventful recovery with no signs of recurrence.

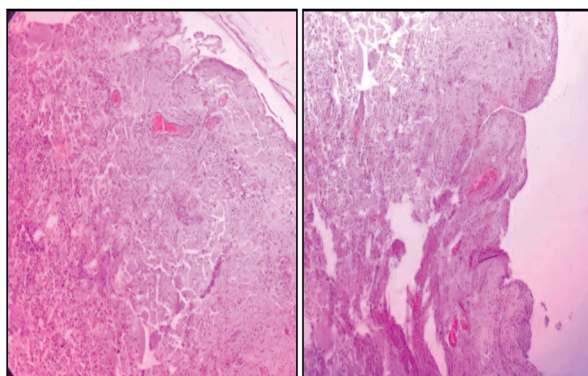


Figure 2. Microscopic picture (H & E stain) showing hyperkeratotic, hyperplastic stratified squamous epithelium, edematous fibrocollagenous stroma with diffused mixed inflammation infiltrate

DISCUSSION

Virchow first described the term Epulis in 1864. An epulis is a localized gingival growth, commonly arising in the interdental papillae. Based on the predominant histological component, there are four types of epulis namely: fibrous, granulomatous (pyogenic granuloma), angiomatous and giant cells epulis. According to some authors, they represent different developing stages of a single pathological entity that, at the initial stages, would be rich with vascular and cellular components while in progressive stages may show increased fibrous constituent. The term "reactive localized inflammatory hyperplasia" is used most aptly and includes lesions like pyogenic granuloma/pregnancy tumor, peripheral ossifying fibroma, denture irritation hyperplasia, peripheral giant cell granuloma and the fibrous epulis as these lesions develop in response to chronic and recurrent tissue injury which stimulates an excessive tissue response^{6,7}. These lesions also appear to be aetiologically related to systemic factors such as hormonal changes.⁷ The clinical features of these lesions, usually appear to reflect the various stages of development since in the early stages they

appear red, friable with ulcerated surfaces that bleed on slight touch or spontaneously, while in the late stages, they appear as firm, mature and avascular fibrous growths which may be sessile or pedunculated. The most common clinical aspect of the fibrous epulis is the growth of well-delineated lesion with a smooth surface with normal coloured mucosa having a sessile or pedunculated base, of firm to hard consistence, usually located on the anterior maxillary, in the interdental papilla.^{3,7,8} Although in our case, the lesion was located in the posterior maxillary area in the interdental papilla. Also a epulis so enormous as seen in our case report is unusual.^{9,10,11} Female preponderance is seen by most authors although no marked difference in the location between upper and lower jaws was seen by these authors except Carbone and colleagues¹² who in their study reported a significant higher frequency and site distribution in maxilla than in mandible. The definitive diagnosis of an epulis relies on histopathological examination which is very crucial since it aids in differentiating from other lesions and most importantly helps in ruling out malignancies such as fibrosarcoma, Burkitt's lymphoma, or squamous cell carcinoma.³ Fibrous epulis are composed of proliferating fibroblasts and collagen fibres with a minimal degree of inflammatory cell infiltration and vascular dilatation.

The standard treatment involves complete excision of the lesion and thorough curettage of the area due to its origin from the periosteum and periodontal ligament cells and removal of local irritative factors.¹³ Rate of recurrence is 10%.¹³ In such cases it might be necessary to remove the tooth associated with the lesions themselves. The extraction of the neighbouring teeth is usually not done unless there is underlying bony involvement.^{2,5,8} Similar to a case report of a giant fibrous epulis by Laus M,

given the presence of a very thin pedicle in our case, we decided to remove the mass without manipulating the underlying bone of the alveolar ridge, and, after a follow up of about 1 year, the lesion has not recurred.¹⁴ In our opinion, the decision of the manner in which the lesion in our case was removed is applicable whenever the lesion shows a very thin stalk with no gingival or bone alteration at the site of its implantation. In this case, we used bipolar electrocautery to excise it from the pedicle. Patient was advised to maintain good oral hygiene with discontinuation of irritative agents. Dental consultation was sought with regular follow-ups to look for recurrence.

CONCLUSION

Epulis arises in response to local irritation affecting the gingiva. Trauma during mastication may ulcerates this lesion imparting it a malignant look. Clinically it is a diagnostic dilemma if we need to differentiate it with other closely resembling lesions and also if lesion has attained enormous size presenting late like in our case which is unusual for a reactive lesion like Epulis. Hence a histopathological examination of the tissue specimen is mandatory for confirming the diagnosis. Successful treatment involves complete surgical excision and removal of any contributing irritative factors. Our case demonstrates that for lesions with thin pedicle and no underlying bone involvement, a conservative approach with electrocautery can be effective treatment method with a favourable outcome.

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Authors Declarations

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Author contributions

All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by Deeksha Shetty, Saloni Singh Baghel, Dharmendra Kumar and Prerna Singh. The first draft of the manuscript was written by Deeksha Shetty and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

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