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A 34-Year-Old Female with Epulis Granulomatosa: A Case Report

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ABSTRACT

Epulis is any tumor-like growth in the oral cavity. Epulis granulomatosa is a growth of soft tissue originating from the socket of the tooth, and it is thought to be caused by tooth extraction in the past and as a benign exophytic lesion of soft tissue in the form of a hyperplastic reaction. Excisional biopsy is the gold standard of treatment. In this article, we present a case of Epulis granulomatosa in a 34-year-old female patient who was treated with an excisional biopsy.

Keywords: Epulis; Extraction socket; Soft tissue tumor.

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Introduction

There are various soft tissue lesions in the oral cavity. Epulis granulomatosa is a tumor-like growth as a complication of an unrepaired tooth extraction and is often confused with other soft tissue lesions such as granuloma and fibroma [1]. Epulis granulomatosa is a vascular lesion characterized by the growth of granulation tissue in the cavity of a recently extracted tooth. Tissue growth represents a response to the presence of bone spicules or tooth fragments, which leads to the formation of granulation tissue as a means of repair or healing at the site of injury [2].

Clinically, EG manifests as an exophytic lesion with a smooth surface or lobule, peduncle or with a wide base. The color of the surface varies from pink to red or purple depending on the duration of the lesion [3]. Histologically, Epulis granulomatosa is an inflammatory granulation tissue with numerous blood vessels. Infiltration of chronic inflammatory cells, especially lymphocytes, is evident [4]. The treatment of EG includes complete removal of the lesion with histopathological examination of the tissue to confirm the diagnosis [3]. Recurrence is rarely observed, because the inflammatory response stimulus is eliminated by removing the lesion [4]. In this case report, the process of diagnosis and treatment of a patient with Epulis granulomatosa in the upper jaw is presented.

Case Presentation

A 34-year-old woman complained of a prominent lesion in the upper jaw and was referred to the Oral Diseases Department of Hamadan Dental School. According to the patient's statement, the lesion was created about 2 years ago and is growing. The lesion had no pain or bleeding. There was no change in sensation, but it interfered with eating. The patient had no systemic symptoms, fever, weight loss, or lethargy. In the clinical view, a pedunculated, tumoral, exophytic lesion with a lobular surface and redder than the surrounding mucosa, measuring approximately 1.5 x 2.5 x 5.3cm, was located behind the right tuberosity of the maxilla with an elastic consistency (Figure 1). The lesion had no radiographic appearance. After removing the lesion, the area was sutured and sent to the pathology department of Hamadan Be'sat Hospital for histopathology examination (Figure 2). For the final diagnosis, an excisional biopsy was performed. In the histopathological view, sections show squamous epithelium with ulcer at the surface, Proliferation of fibroblasts in the stroma, Angiogenesis (formation of new blood vessels), and Infiltration of inflammatory cells (primarily macrophages, lymphocytes, and plasma cells). Ultimately, this lesion was diagnosed microscopically as epulis granulomatosa.

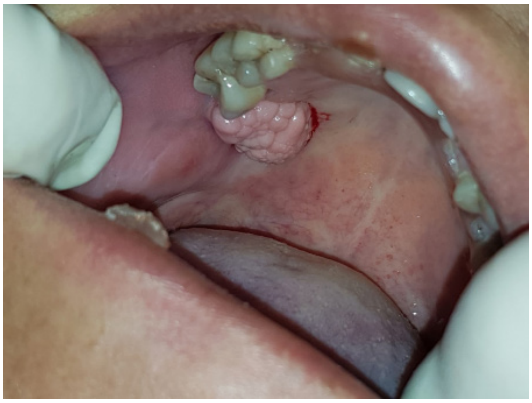


Figure 1. Intraoral view of the lesion.



Figure 2. View of the lesion after biopsy.

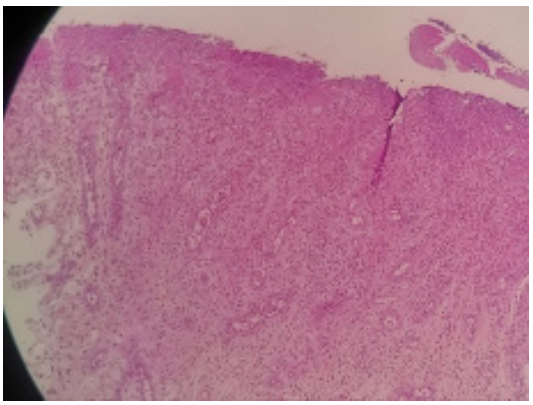


Figure 3. Hematoxylin-eosin staining. The main feature of reactive granulomatous epulis is the presence of granulation tissue, proliferation of new capillaries, and connective tissue containing abundant fibroblasts and collagen beneath the epidermal layer.

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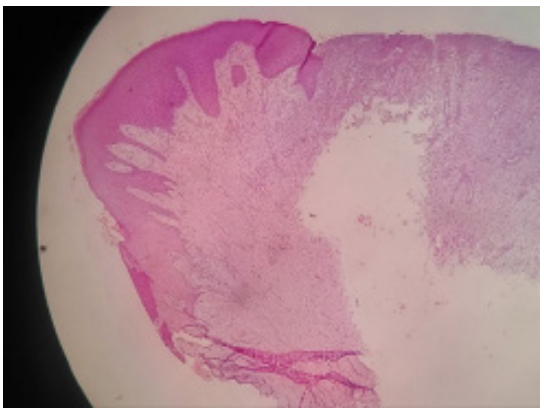


Figure 4. Hematoxylin-eosin staining of stratified squamous epithelium with an ulcerated surface in some areas. The lesion shows fibroblast proliferation and the presence of inflammatory cells beneath the overlying epithelium.

Discussion

Epulis is derived from the Greek root, which means "enlargement," and it can be found in different parts of the oral cavity, such as gums, alveolar mucosa, and is a benign proliferation of the soft tissue in that place [1]. Epulis granulomatosa is characterized by the development of an exophytic lesion due to tissue growth within the cavity of a recently extracted tooth. The clinical growth of the lesion is rapid, asymptomatic and painless, but it may also grow slowly. Bleeding caused by EG can easily happen due to the proliferation of multiple blood vessels [5]. In terms of clinical features, foreign body reaction, pyogenic granuloma, hemangioma, giant cell granuloma are differentially diagnosed with Epulis granulomatosa [2]. Epulis granulomatosa is also called hemangiomatous epulis, which describes the significant presence of blood vessels in the lesion [4].

The etiology of EG can be mostly attributed to traumatic tooth extraction. Other causes include local stimuli such as crime, hormonal factors, some drugs, and poor oral hygiene [3]. The tendency is slightly higher for female gender and young age [1]. The treatment of Epulis granulomatosa depends on the clinical manifestations, but the surgical removal of the lesion and the removal of local irritants are the treatment of choice [3]. Recurrence may occur due to failure to remove the lesion completely, failure to remove the etiological factors with re-injury of the area. A detailed inspection of the extracted tooth socket is recommended to check the remains of bone or tooth structure or even cementum fragments to prevent inflammatory reaction [4].

Conflict of Interest

There is no conflict of interest to declare.

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