"Case Report"

Granulomatous Epulis in Maxillary Anterior Interdental Teeth

Eugenia Inbitsaqun Nabighoh¹, Dwi Suhartiningtyas², Hartanti³
¹ School of Dentistry, Faculty of Dentistry, Universitas Muhammadiyah Yogyakarta, Yogyakarta 55183, Indonesia
* Corresponding author, e-mail: eugeniainbitsaqun@gmail.com

Abstract

Introduction: Epulis is a tumor-like enlargement of the gingiva originating from periodontal connective tissue, which is caused by chronic irritation. Epulis that occurs on the upper anterior teeth will disrupt the aesthetics and function of the lips and reduce self-confidence, so treatment is needed. Case report: The patient came to RSGM complaining that there was a lump on the upper front tooth and it felt painful. The patient had gone to the dentist regarding this case and was given topical medication, but the patient forgot the name of the medication. The patient's pain is aggravated when brushing his teeth and eating hard food or meat, for the taste is relieved when left alone. At the first meeting, patients are given information and education regarding the disease they are suffering from. Case management: The surgical phase by excision of the epulis with gingivectomy and subsequent curettage after surgical treatment of the gingiva. Discussion: Granulomatous epulis is a tissue mass that only exists and stop growing. The etiology of granulomatous epulis lesions is usually caused by chronic irritation. Conclusion: Excision treatment and gingival formation performed with a scalpel can be considered for the treatment of maxillary anterior granulomatous epulis.

Keywords: Granulomatous Epulis; Oral Lesions; Excision; Gingivectomy

INTRODUCTION

Epulis is a tumor-like enlargement of the gingiva originating from periodontal connective tissue, caused by chronic irritation. Epulis that occurs on the upper anterior teeth will disrupt the aesthetics and function of the lips and reduce self-confidence, so treatment is needed. Granulomatous epulis can occur at any age, but the disease is most often diagnosed in women aged forty to sixty years.¹

Granulomatous epulis, which is also often referred to as hemangiomatous epulis, originates from a large number of blood vessels that are visible on histopathological images. This condition also often appears between two teeth (known as interdental), which are richly vascularized so they bleed easily when touched and are usually reddish in color.²

Tumors are new tissues that appear in the body due to various causes. Tumors in teeth can be divided into odontogenic and nonodontogenic tumors. Odontogenic tumors can also be divided into ectodermal, mesiodermal and mixed tumors of mesiodermal origin. Non-odontogenic tumors can be divided into osteogenic tumors, non-osteogenic tumors, blood vessel tissue tumors, and nerve tissue tumors.³

The etiopathogenesis of pyogenic granuloma is still debated. Reactive gingival hyperplasia as a reaction to irritation is called pyogenic granuloma which most often occurs in the gingiva. This is thought to be caused by poor individual oral hygiene as well as the presence of long-term irritants such as calculus or foreign bodies in the gingival cavity. Improved gingival response to trauma is influenced by hormonal changes during puberty and pregnancy, so that pregnancy tumors (granuloma gravidarum) appear in pregnant women⁴

Treatment of granulomatous epulis is based on the symptoms presented by the patient. If the wound is small and does not cause pain or bleeding, clinical observation and additional examinations may be
recommended. For extensive lesions with significant loose teeth or recurrent lesions, excision, which reaches the periosteum and remains on the tooth for a long time, is a common therapy. For recurrent lesions, intrusive resection, which involves removing adjacent teeth, should also be performed.5

Case Report
The patient came to RSGM complaining that there was a lump on the upper right front tooth. This condition has been felt since February 2022. The lump is in the interdental part of teeth 11-12. This condition causes pain when exposed to exposure, such as when eating or brushing teeth. The pain was initially on a VAS scale of 8, but over time the patient began to get used to the pain so that now the pain is on a VAS scale of 4. The pain appears and lasts for 1-2 minutes immediately after exposure. This condition was taken to the dentist on May 9 2022 and has not been given any treatment. Just given anti-pain medication. The patient's mother also experienced the same condition as the patient, but now the condition experienced by the patient's mother has disappeared. The patient is currently taking routine medication, namely anti-depressant medication in the form of Clophritis clobaxam and Fluoxetin HCI which the patient has been taking since December 2022 at a dose once a day.

On objective examination, there was a nodular lesion in the interdental area of teeth 11 and 12, oval in shape, well-defined with a size of around 5 mm, a chewy and dense consistency and a reddish pink color. Investigation of the preparations showed mucosal protrusions lined with dominant complex squamous epithelium, some with raised rete ridges and acanthosis. The stroma is sparse, in the form of fibrotic connective tissue and granulation with many acute and chronic inflammatory cells, dominant lymphocytes, and quite extensive tissue necrosis. There was also proliferation of blood vessels with vasa hyperemia. There were no signs of malignancy. Based on subjective, objective and clinical examination, the clinical diagnosis in this case is Granulomatous Epulis. The prognosis for this case is good because the teeth are still vital, there is still plenty of healthy tooth tissue structure, and the patient has the motivation to care for his teeth.

Case Management
Treatment of granulomatous epulis consists of surgical excision of the lesion and removal or removal of trigger factors such as tartar and maintaining oral hygiene. Initial therapy is carried out before the next action, the initial therapy is in the form of scaling or cleaning tartar and IEC regarding the condition experienced by the patient. This epulis case did not include malignancy so the patient was given further treatment. After initial therapy is carried out, it is continued in the surgical phase by excision of the epulis with gingivectomy and subsequent curettage after surgical treatment of the gingiva.

The patient was given medication in the form of antibiotics which were consumed.
for 5 days at a dose of 500mg 3x1 and anti-
pain medication in the form of ibuprofen which was consumed only when he felt sick. Then, the patient was instructed to carry out control after 7 days after treatment. The prognosis for patients with pyogenic granulomatosis is excellent. Pyogenic granulomas tend to recur due to incomplete excision. Pyogenic granulomas do not have malignant potential.6

Discussion
In this case, it can be concluded that the etiology is due to the buildup of plaque and tartar on the patient's teeth, so it could trigger the body's response by forming epulis. Pyogenic granuloma is considered a reactive hyperplasia in response to a stimulus or tissue damage caused by calculus or foreign bodies located within the gingival cavity, according to Regenzi et al. (2003) Epulis lesions can be caused by many things, such as trauma, tooth damage, chronic irritation, hormones, drugs, gingivitis, overhang restorations, food impaction, and periodontitis totalis.7 The differential diagnosis of pyogenic granuloma is peripheral giant cell granuloma and peripheral ossifying fibroma because both are macroscopically identical. In one study, of 100 patients who were first diagnosed with pyogenic granuloma, it was found that 10% of the initial diagnosis included peripheral ossifying fibroma and 5% peripheral giant cell granuloma8. Giant cell epulis is an exophytic lesion frequently seen on the gingiva and is clinically similar to granulomatous epulis. However, it is purplish red rather than bright red granulomatous, and alveolar bone resorption is more common than giant cell epulis.9 On clinical examination, it is difficult to differentiate giant cell granulomatous epulis from ordinary granulomatous epulis, but it can be seen through histopathology, which shows many epulis nuclei in giant cells and fewer sources of infection. Pyogenic granuloma is still a subject of discussion regarding its etiopathogenesis. Some researchers include pyogenic granulomas in the category of infections involving staphylococci and botryomycosis10.

Conclusion
Gingivectomy is one method of treatment in cases of granulomatous epulis or also known as pyogenic epulis. With the condition of an epulis lesion that is not suspected of malignancy.

Acknowledgment
Case report purely for scientific development.
Reference


