

Removal of Fibromatous Epulis Around The Anterior Maxillary Teeth (Case Report)

Pengambilan Epulis Fibromatosa pada Gigi anterior Rahang Atas (Laporan Kasus)

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ABSTRACT

Fibromatous epulis is one of the most common features of the gingival enlargement. This condition results from inflammation of the gingiva, leading to fibrotic overgrowth caused by local or systemic factors. These enlargements increase gingival pocket depth, which may lead to periodontal disease causing functional disturbances in mastication, altered speech, aesthetics, and even psychological problems. A- 42-year-old male patient with gingival fibrotic overgrowth known as fibromatous epulis on proximal teeth in the middle upper front region extended to the palatal and accompanied by slight pain. The clinical appearance of this lesion was firm, slightly soft, and fibrotic, with 6 mm probing depth and bleeding on gingival probing at the proximal of 11 and 21 teeth region. In this case, periodontal surgery to eliminate gingival enlargement was a gingivectomy under local anaesthesia. The fibromatous epulis was entirely eliminated by gingivectomy, also effectively treated the inflammation, facilitated oral prophylaxis procedure, and increased the aesthetics.

Keywords: Gingival enlargement, anterior maxillary teeth, fibromatous epulis, gingivectomy

Abstrak

Epulis fibromatosa merupakan salah satu gambaran paling umum dari pembesaran gingiva. Kondisi ini diakibatkan oleh peradangan pada gingiva yang menyebabkan pertumbuhan berlebih yang fibrotik disebabkan oleh faktor lokal atau sistemik. Pembesaran ini meningkatkan kedalaman poket gingiva yang dapat menyebabkan penyakit periodontal yang menyebabkan gangguan fungsional dalam pengunyahan, gangguan bicara, estetika, dan bahkan masalah psikologis. Pasien laki-laki berusia 42 tahun dengan pertumbuhan berlebih gingiva fibrotik yang disebut epulis fibromatosa pada gigi proksimal di daerah rahang atas bagian tengah depan, meluas ke palatal dan disertai nyeri ringan. Gambaran klinis lesi ini kaku, agak lunak, fibrotik, kedalaman probing 6 mm, dan terdapat perdarahan pada saat probing gingiva di proksimal regio gigi 11 dan 21. Bedah periodontal untuk menghilangkan pembesaran gingiva dalam kasus ini adalah gingivektomi dengan anestesi lokal. Epulis fibromatosa dihilangkan sepenuhnya melalui gingivektomi dan juga efektif mengobati peradangan, memfasilitasi prosedur profilaksis oral, dan meningkatkan estetika.

Kata Kunci: Pembesaran gingiva, gigi anterior rahang atas, epulis fibromatosa, gingivektomi

INTRODUCTION

Gingival enlargement is a condition that occurs as a result of a host-oral environment interaction or as a reaction to a physical stimulus.¹ These lesions generally grow slowly and do not cause symptoms, and considered as an increase in the non-neoplastic cells that undergo proliferation in response to the action of physical irritants.² Epulis is a term for a nonspecific tumor and a tumor-like mass on the gingiva.³ The word epulis was first introduced by Virchoff (1864). The term comes from the ancient Greek 'epoulis' which means 'growth on the gums'.⁴

Fibrous inflammatory hyperplasia also known as fibromatous epulis usually appear as a firm mass, variable in colour depending on the histological component which is often identified from pink to dark red, and in most cases asymptomatic; if pain occurs it can be caused by secondary trauma, and and mastication problems..^{5,6,7} It begins as a small swelling of the interdental papilla or gingival margin forming a lifesaver-like bulge around the involved tooth and this bulge increases until it covers part of the crown. The progress of fibromatous epulis is slowly and painlessly, it may be complicated by trauma or acute infection.⁸

One of the purposes of gingivectomy as a conventional surgery in periodontal therapy is management of gingival enlargements.³ Gingivectomy is a procedure involving gingival excision that aims to remove the pocket wall, while providing visibility and accessibility to remove the calculus and then refine the root thoroughly. It creates a favourable condition for healing of gingiva and a physiologic gingival contour of restoration. Indications for gingivectomy including supra bony pocket, fibrous and firm pocket wall elimination, gingival enlargements elimination and supra bony periodontal abscesses elimination. While for contraindications of gingivectomy are bone surgery or examination of the bone shape and morphology needed, the infrabony pocket. Gingivectomy can be conducted using a scalpel, electrodes, laser, or chemicals.⁹

Clinical swelling of the gingiva can lead to epulis, the result of gingival hyperplasia due to irritation of the gingiva. Fibrous inflammatory hyperplasia is also known as fibromatous epulis.⁶ Fibromatous

epulis is a tumorlike gingival lesion that does asymptomatic, but can carry out aesthetics and mastication problems.^{7,10} It begins as a small swelling of the interdental papilla or gingival margin forming a lifesaver-like bulge around the involved tooth and this bulge increases until it covers part of the crown.¹¹ The progress of fibromatous epulis is slowly and painlessly, it may be complicated by trauma, irritant stimuli, or acute infection.^{8,12}

CASE REPORT

A 42-year-old male patient visited the Periodontics Department, Universitas Padjadjaran with swollen gums at the proximal teeth 11 and 21 in the middle upper front region, extended to the palatal to about 0.75 cm, and accompanied by slight pain. The patient occasionally felt uncomfortable during mastication while performing activities in front of people. Local factors, such as dental plaque and calculus were detected at the upper and lower teeth. The enlargement was firm, slightly soft, fibrotic, with probing depth of 6 mm and gingival bleeding on probing at 11 and 21 teeth (Fig. 1). The patient was a non-smoker, non-drug user, and without both of systemic disease and familial history. There was a normal radiographic appearance in the area of maxillary anterior teeth (Fig. 2).



Figure 1. Gingival clinical features on first visit



Figure 2. Radiographic examination

Instructions of oral hygiene were given on first visit after initial treatment. After first therapy, the patient was recalled, and the results were assessed. On the upper front two teeth, fibrotic enlargement persisted despite the inflammatory enlargement's recovery (Fig. 3).

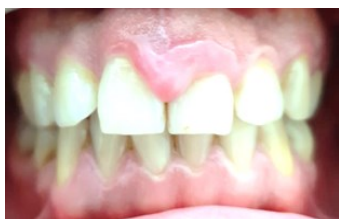


Figure 3. Clinical appearance of upper anterior gingiva after phase I therapy

Informed consent was obtained from the patient. Periodontal surgery was not contraindicated for the patient. It was intended to carry out gingival surgery using the gingivectomy method. Anesthesia was delivered by 2% Lidocaine HCl at a concentration 1:80.000, injected in labial midline aspect of maxilla. The pockets were investigated with a periodontal probe. Then the gingiva marked with a pocket marker to create bleeding points along two third distal of 11 to one third distal of 21.



Figure 4. Gingival pocket exploration and marking on facial surface of 11 and 21 using pocket marker.

For incision on facial surfaces of 11 and 21, we used combination between periodontal scalpel no.15C and Kirkland knives. Orban periodontal knife was used for interdental incisions. Combined with blades #15C for

facial aspect and blades #12 for palatal aspect. The incision is continuous, started from two third distal of 11 to one third distal of 21, 1 mm apically to the bleeding points and 45° beveled to the tooth surface towards horizontal plane, created the normal anatomic of gingiva and removed the excised pocket wall.

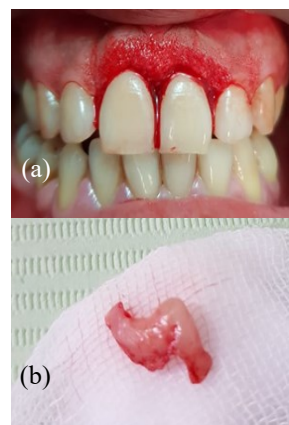


Figure 5. Clinical appearance of gingiva as soon as gingivectomy procedure (a), and the excised gingival tissue (b).

The area was irrigated by 0.9% NaCl. The granulation tissue was curetted carefully, the remaining calculus and necrotic cementum were scaled and planed thoroughly to create a smooth and clean root surface, periodontal dressing then used to cover and protect the surgery area. Instruction after surgery was given, antibiotic and analgetic were prescribed. Seven days later, the patient came for periodontal dressing removal and evaluation. A month after the procedure, the examination was also carried out. The excised gingival tissue was examined at Anatomical pathology laboratory, Hasan Sadikin Hospital. The biopsy specimens were taken to Pasteur 38 Bandung Hasan Sadikin Hospital laboratory, Universitas Padjadjaran, Anatomic Pathology Laboratory for histopathological examination with Sample Number: PB 190622. Histopathological examination results showed that microscopically coated by epithelial layers were partially erosive layer. The nucleus was within normal limits. The subepithelial layers appeared hyalinized fibrocollagen connective tissue stroma to be with massive lymphocytes, plasma cells and histiocytes. There was no sign of malignancy.

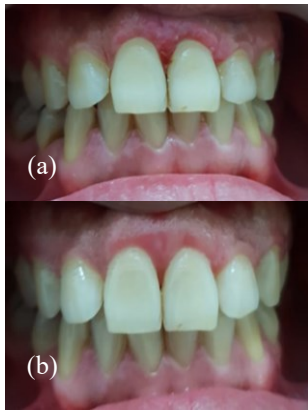


Figure 6. Evaluation 1 week after gingivectomy (a), and evaluation 1 month after gingivectomy (b).

DISCUSSION

Gingival enlargement treatment in this patient begun with initial therapy at the first visit, including Oral Hygiene Instruction (OHI) and SRP (Scaling and Root Planing). SRP procedures were performed to remove etiological factors such as soft and hard deposits that caused inflammation of the gingiva. Surgical therapy was conducted 1 week later by Gingivectomy procedure. The gingivectomy was started by infiltration anesthesia with Pehacaine, followed by tissue excision using periodontal surgical instruments, irrigation of the surgical area with saline solution, SRP of area under excised gingiva, gingival recontouring, final irrigation and closure of the surgical area with periodontal pack and medications. Excisional biopsy in saline solution prepared in this case as a supporting examination to establish the diagnosis.

Excisional biopsy has an advantage that the lesion was removed permanently and does not leave any remaining tissue. The prognosis of this case was good because there was no bone involvement, the patient's oral hygiene was controlled, there was no systemic factor and the patient was cooperative. Based on the results of subjective, objective and supporting examinations it could be concluded that the diagnosis for this case was fibromatous epulis.

Maintenance therapy was then performed 1 week later with post-gingivectomy control. The results of the subjective examination found that the patient still felt a little pain in the surgical area.

Objective examination results had no enlarged gums in the anterior region of the maxillary teeth, but there was still a reddish color in the post-gingivectomy area. Inflammation that occurred one week after gingivectomy was a common thing because surface epithelialization was generally completed after 5-14 days. Post-gingivectomy control then was performed 1 month later. Subjective examination results indicate the patient felt comfortable and had no complaint and objective examination results showed no signs of gingival inflammation.

Gingival enlargement is often found in patients and the common treatment is gingivectomy. This gingival enlargement should not be considered a small thing because it could be a malignancy. A dentist should be able to collect all of information from both subjective and objective examinations. All information is then analyzed into a comprehensive treatment plan. In this case, an additional examination was carried out by a biopsy through histopathological examination of the specimen to help establish the diagnosis. The result of this examination was a fibromatous epulis. Therefore, gingivectomy is suitable to treat this condition.^{7,10}

CONCLUSION

Initial therapy followed by gingivectomy for fibromatous epulis is effective in treating inflammatory gingival enlargement, facilitate oral prophylaxis procedure, and improve aesthetic.

CONFLICT OF INTERESTS

No conflict of interests.

REFERENCES

1. Carranza FA, Hogan EL. Gingival enlargement. In: Newman MG, Takei HH, Klokkevold PR, Carranza FA. Carranza's Clinical Periodontology. 11th ed. Philadelphia, Penn: W.B. Saunders Company; 2006:373-390.
2. Newman MG, Takei H, Klokkevold PR, Carranza FA. Carranza's Clinical Periodontology, 9th ed. Philadelphia: Saunders; 1996:280-4.
3. Choudari, P., Kamble, P., Jadhav, A., Gingival Epulis: Report of Two Cases, *Journal of Dental and Medical Sciences*, 2013(7): 40-44.

4. Rajanikanth BR, Srinivas M, Suragimath G, Pai BSJ, Walvekar A et al. Localized gingival enlargement: a diagnostic dilemma. *Indian J Dent.* 2012(3): 44-48.
5. Ajagbe HA, Daramola JO. Fibrous epulis: experience in clinical presentation and treatment of 39 cases. *Journal of the National Medical Association.* 1978(70):317-319.
6. Dabholkar, J., Vora, K., Sikdar, A., Giant Fibrous Epulis. *Indian J. Otolaryngol. Head Neck Surg.* 2008(60): 69-71.
7. Sumarta, N.P., Kamadjaja, D.B. Fibrous Epulis Associated with Impacted Lower Right Third Mola. *Dent.J.*, 2009;42(4): 172-174.
8. Singh D, Pranab A, Mishra N, Sharma AK, Kumar S, et al. Epulis - Commonly Misdiagnosed Entity: A Report of 2 Cases. *J Interdiscipl Med Dent Sci.* 2018.(6): 1-3
9. Newman, MG; Takei, HH; Klokkevold, PR; Carranza, FA; editors: Carranza's Clinical Periodontology, 10th Edition. Philadelphia: W.B. Saunders Company, 2006:912-9
10. Ohta, Keiichi., Yoshimura, Hitoshi. Fibrous Epulis: A tumorlike gingival lesion *Cleveland Clinic J. of Medicine.* 2021.88(5): 265-266
11. Esmeli, Tara., Lazada-Nur. Fransisca., Epstein, Joel., Common benign oral soft tissue mass. *Dent. Clinics of North America.* 2005; 49(1): 223-240.
12. Brierley DJ, Crane H, Hunter KD. Lumps and bumps of the gingiva: a pathological miscellany. *Head Neck Pathol* 2019; 13(1):103–113.