



Research article

Management of Fibrous Hyperplasia in Geriatric Patient with Hypertension: A Case Report

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Abstract.

Background: Fibrous hyperplasia or epulis fissuratum is a name related to reactive tissue response to chronic irritation and trauma caused by dentures that are not properly attached. Persistent trauma to the oral mucosa can cause a carcinoma. The treatment management of epulis fissuratum becomes very challenging for geriatric patients.

Objective: To discuss the treatment of fibrous hyperplasia in geriatric patients with a history of hypertensive disease.

Case Report: A 63-year-old woman with a history of hypertension presented to the Periodontia Department of Hasanuddin University Dental and Oral Health Hospital with complaints of swollen gingiva, the enlargement beginning ± 6 months prior. Clinical examination showed a gingiva 4x1x0.6 cm in diameter along the alveolar ridge of the right lower jaw. The inflammation in the gingiva was suspected to be fibrous hyperplasia/epulis fissuratum. The treatment procedure performed was excision of the epulis and administration of cyanoacrylate.

Results: One week and one month postoperatively, a good healing process and excellent result with no more gingival enlargement were reported.

Conclusion: The management of fibrous hyperplasia with prevention strategies as well as excision and administration of cyanoacrylate is an effective procedure for bleeding control and to accelerate healing in geriatric patients with a history of hypertension.

Keywords: epulis fissuratum, fibrous hyperplasia, geriatric, hypertension

1. Introduction

Fibrous hyperplasia, also known as epulis fissuratum, is a benign tumor that develops above the gingiva in the soft tissues of the oral cavity and is most often seen in those who wear dentures [1]. The growth of connective tissue in the epulis fissuratum is caused by chronic irritation due to the use of dentures. In this case, the denture often

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presses on the gum area that borders the inner cheek. The occurrence of continuous pressure, resulting in the bones in that section will gradually change. This makes the supporting bone that is the basis of the denture unstable so that the epulis fissuratum is formed. Epulis should essentially be treated because it inhibits masticatory function. Epulis fissuratum is commonly found in elderly patients who use dentures more often [2, 3].

The treatment management of Epulis fissuratum becomes very challenging for geriatric patients where the main thing that needs to be considered in the care of geriatric patients is not only an understanding of dental and oral health problems, systemic health, but also psychological problems (fear, anxiety, and stress). One of the systemic disorders that often occurs in geriatric patients is hypertension [4, 5].

Hypertension is a condition that requires efficient management where hypertension cannot be cured but must always be controlled so that unwanted complications do not occur and have a predilection for myocardial infarction, stroke, etc. In dentistry, the goal of treatment management for hypertensive patients is to provide treatment with appropriate preventive strategies with the patient's physical condition and emotional ability to receive and respond to treatment so that further complications due to hypertension during dental treatment can be avoided. Preventive strategies include all actions to control the patient's blood pressure including all actions to eliminate causes that can increase the patient's blood, including anxiety or stress control, selection of anesthetics, anesthetic materials, and pain control after the procedure is completed [6].

1.1. Objective

This case report aims to discuss the management of epulis fissuratum care in geriatric patients with a history of hypertension.

2. Case Report

A 63 years old female patient came to the Periodonsia Department of Hasanuddin University Dental and Oral Health Hospital with the chief complaint of painful gums and enlargement of the right lower gum since 6 months ago. The patient has been using dentures for 5 years, and currently the patient complains that his dentures feel loose and interfere with the masticatory process. The patient's medical history has a history of systemic disease, namely hypertension, and is currently taking calcium channel blocker

antihypertensive drugs, namely amlodipine 1x10 mg was taken at night. There is no family history of the same disease. The patient's social history is working as a housewife and living with her child.

Physical examination revealed good general condition. Vital signs found were blood pressure 160/100, pulse 78 times per minute, respiration 22 times per minute, and body temperature of 36° C. Extraoral examination, there were no abnormalities. In intraoral examination, there was edentulous in the maxilla and mandible, and enlarged gums along the right mandibular alveolar ridge with a diameter of 4x1x0.6 cm (Figure 1). The panoramic radiograph showed no severe bone loss, especially in the lower right region where the gums were enlarged (Figure 2).



Figure 1: Intraoral photo shows enlargement of the gums in the posterior, right lower jaw . (Source: Author's own work).



Figure 2: Panoramic view showing no severe bone loss in the lower right region. (Source: Author's own work).

Based on the examination, it was concluded that the diagnosis of this case was Epulis Fissuratum, the differential diagnosis was Epulis Fibromatosa and the expected prognosis was good.

2.1. Treatment Planning

The treatment plan that will be carried out is excision of the epulis and administration of cyanoacrylate for excellent bleeding control and postoperative healing. Prior to the procedure, the patient was referred to the internal medicine department for hypertension control and approval from the internal medicine doctor for a surgical procedure.

At the next visit, excision of the epulis will be performed. Stress reduction protocols such as morning surgery schedules, and an environment that is made as comfortable as possible so that patients are not stressed during treatment. Blood pressure, pulse, respiration, and temperature were re-measured prior to preparation for the surgical procedure. The results of the examination obtained blood pressure 140/90, pulse 80 x/minute, respiration 24 x/minute, temperature 36,4 °C and the patient had received an explanation of the treatment procedure and did not refuse to sign the informed consent before the surgical procedure was performed.

Prior to the procedure, tools and materials were prepared including diagnostic tools, cytoject, local anesthetic, blade no 15c, scalpel holder, needle holder, thread scissors, and 5-0 nylon thread.

2.2. Surgical Procedures

The first step is disinfection of the work area with povidone iodine (Figure 3), then perform local anesthesia with infiltration techniques in the buccal and lingual areas using the anesthetic lidocaine and adrenaline in a ratio of 1: 100000 (Figure 4). Excision with a scalpel was carried out until the entire tissue was detached from the stalk (Figure 5). Then suturing and administration of cyanoacrylate was performed to control bleeding and to accelerate healing (Figures 6 and 7). Then the tissue sample was sent to the Anatomical Pathology laboratory (Figure 8). The entire procedure is performed in a short time, without pain. Hemostasis was achieved immediately after the procedure. The patient feels comfortable after the operation. Patients describe the procedure as completely stress-free, anxious, and painless.



Figure 3: Disinfection surgery area with povidone iodine. (Source: Author's own work).

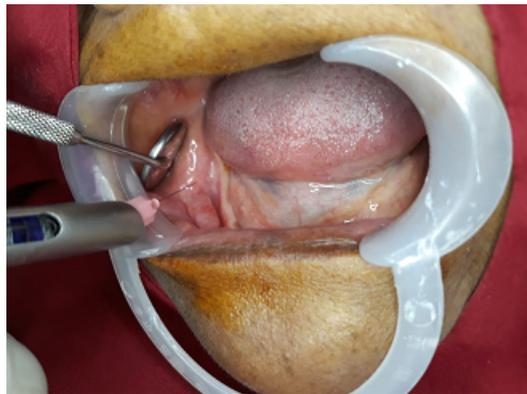


Figure 4: Infiltration anesthetic in buccal and lingual. (Source: Author's own work).

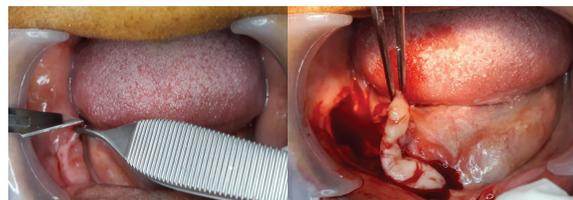


Figure 5: Excision of the epulis tissue until the stem is removed. (Source: Author's own work).

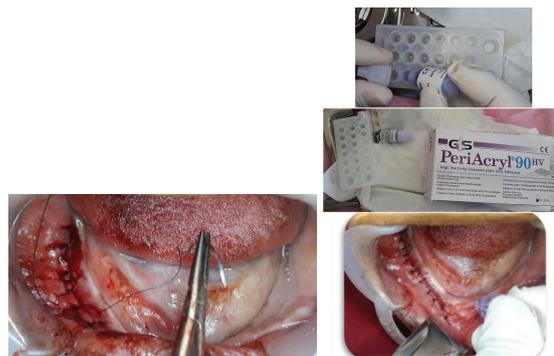


Figure 6: Hecting and Administration of cyanoacrylate for bleeding control and to accelerate healing.(Source: Author's own work).



Figure 7: Sending the tissue sample to the Anatomical Pathology laboratory. (Source: Author's own work).

2.3. Post Surgical Preparation

The patient was administered amoxicillin 500 mg 3 times daily for 5 days, Paracetamol 500 mg 3 times daily for 5 days and chlorhexidine digluconate 0.12 percent 3 times daily for 4 weeks. The patient was instructed not to chew on the surgical region. One week following surgery, the patient was controlled and the sutures were removed.

2.4. Treatment Result

The patient was called back after 1 week for control and open the suture, it appears that the surgical area has started to dry but the wound has not been completely closed. (Figure 9). Results After 1 month of treatment, the tissue healed well and there was no recurrence of the lesion (Figure 10). Patients are satisfied with the results of the treatment.



Figure 8: After 1 week operation. (Source: Author's own work).



Figure 9: After 1 month operation. (Source: Author's own work).

2.5. Anatomical Pathology Laboratory Results

Laboratory results showed that the tissue was lined with regular stratified squamous epithelium, some of which appeared hyperplastic, nonatypical, including ulcerated areas, a proliferation of spindle cells of fibrous connective tissue, a proliferation of blood vessels, lymphohistiocytic inflammatory cells, plasma cells, no malignant picture. on this preparation. Conclusion of diagnosis: Epulis Fissuratum



Figure 10: The results of Laboratorium Patology Anatomy. (Source: Author's own work).

3. Discussion

Epulis fissuratum is a localized and prominent gingival enlargement due to local or chronic irritation. Epulis fissuratum is usually found in removable dentures usually under the anterior wing. The soft tissue in the mucobuccal region is hypertrophied as a result of irritation of the denture wings that are too long and too sharp. The condition of the wing being too long is usually caused by an improperly positioned denture base [7, 8].

The management of epulis fissuratum care in geriatric patients who have systemic diseases such as hypertension is a challenge for dentists where according to the American Society of Anaesthesiologists (ASA) patients, including ASA II patients with stage 1 hypertension, with blood pressure 140/90 – 159/99, stable medically, there is no restriction of physical activity, it is necessary to monitor blood pressure after a local anesthetic containing adrenaline. Therefore, during surgery doctors must implement preventive strategies that include control of anxiety or stress, selection of anesthetics, anesthetic materials, and pain control during surgery and postoperatively [6, 9].

First, in terms of controlling anxiety or stress, what can be done is to schedule morning operations, and make the environment as comfortable as possible [10].

Second, the selection of anesthetics and anesthetic materials. Local anesthesia is the best choice for hypertensive patients. The vasoconstrictor material that is contraindicated in hypertensive patients is noradrenaline because it will increase blood pressure dramatically, due to stimulating more 1 receptors and less activity at 2 receptors. Adrenaline is safer to use for hypertensive patients (concentration 1:80,000 – 1:200,000), because it will not increase blood pressure dramatically due to stimulation of 1 and 2 receptors which are almost the same, besides the half-life of adrenaline is approximately 1 minute and will be eliminated in approximately 10 minutes, therefore the effect tends to be only momentary. Lidocaine comp 2% with an adrenaline level of 0.025 mg per ampoule can be given to patients with hypertension at a maximum dose of 1.5 ampoules [11, 12, 13].

Third, control the patient's pain. Treatment of Epulis fissuratum consists of two types, namely: conservative and surgical. In this case, the treatment was surgical, namely excision of the epulis and administration of cyanoacrylate to control bleeding and to accelerate healing[14]. Cyanoacrylate is a tissue adhesive that has been widely used in both medicine and dentistry with the aim of tightening wounds and accelerating healing. In periodontology, this material is often used for superficial surgical wounds such as gingivectomy, postoperative wound dressing in the treatment of periodontal

pockets, in the case of preservation sockets, bone grafts, and to close wounds in the donor palate graft area [15]. Another advantage of this material is its fast adhesion to both soft and hard tissues. In addition, this material has good tissue compatibility and response to foreign bodies. An added advantage is the presence of bacteriostatic properties. Cyanoacrylate can be used for tissue and blood vessel repair. So that after surgery it can help to control bleeding and reduce postoperative pain [16].

The limitation in this clinical case was that the patient control distance was too short, so it was not possible to observe whether the lesion recurred after using the denture.

4. Conclusion

Preventive strategies that include control of anxiety or stress, selection of anesthetics, anesthetic materials, and pain control during surgery and postoperatively provide effective results in the management of epulis fissuratum care in geriatric patients who have a history of hypertension. Excision of epulis and administration of cyanoacrylate is a procedure that can be used to control bleeding and accelerate healing in geriatric patients with a history of hypertension. Management with this procedure gives satisfaction to the patient, where the patient describes this procedure as completely stress-free, anxious, and painless.

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