



BENIGN FIBROUS HISTIOCYTOMA OF THE BUCCAL MUCOSA AT SULTAN FATAH DEMAK HOSPITAL: A CASE REPORT

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ABSTRACT

Background: Benign Fibrous Histiocytoma (BFH) is a benign soft tissue tumor consisting of fibroblastic and histiocytic cells. The most often affected locations by BFH lesions are the buccal mucosa, mandibular bones, gingiva, lower and upper lips, soft palate, and floor of the mouth. The etiology of BFH is unknown, but the etiology is thought to be reactive changes from previous infections such as insect bites or thorn pricks. We describe a rare case of BFH of the buccal mucosa and treatment experiences.

Case: A 40-year-old male patient came to the Sultan Fatah Regional Hospital Demak with complaints of swelling of the left cheek below the eye, dizziness and fever for the last 7 days. Patients eat and drink bread mixed in water or tea. The patient came in a compos mentis state, but the patient was less cooperative.

Case management: The patient underwent incision and drainage. The tissue was taken for biopsy examination measuring 1 x 0.4 x 0.3 cm. The patient follow-up was carried out 7 days after the procedure. Results: Follow-up at 7 days after the procedure showed the patient's mouth opening was 1 cm.

Conclusion: In this case, from subjective, objective, and supporting examinations, the cause of infection has not been found. The treatment carried out is incision and drainage of the infection.

INTRODUCTION

Tumor is a term used to indicate a solid mass of a tissue greater than 1 cm in diameter that has the dimension of depth. The term tumor is also used to represent a neoplasm, that is a new, independent, and abnormal growth of tissue with progressive and uncontrolled multiplication of cells that have no physiological use. Tumors are classified as benign, in situ or malignant neoplasm. Benign tumors grow more slowly and are less aggressive or not metastasize, and not transform into cancer than malignant tumors.¹

Benign Fibroblast Histiocytoma (BFH) is a benign type of neoplasm or tumor. Fibrous Histiocytoma, first reported by Kauffmand and Stout in 1961. Fibrous Histiocytoma can be benign or malignant and rarely occurs in the oral cavity, skin or bones.² The most common site is dermis and

subcutaneous layers of the extremities in women, but few cases have been reported in the oral cavity and maxillofacial. The most often affected locations by BFH lesions are the buccal mucosa, mandibular bones, gingiva, lower and upper lips, soft palate, and floor of the mouth. Some researchers have discussed that BFH is most found in the posterior mandible, posterior maxilla and anterior mandible. The tendency of the lesions to be in the left position is widely reported that BFH is also found in the jaw. The sex ratio explained in a study shows that men are slightly more common affected than women with a ratio of 1.3: 1, which is easily found in soft tissue and bone.³

The etiology behind the occurrence of BFH and histogenesis are still not completely understood and there are differences of opinion among pathologists regarding whether BFH lesions are true neoplasms, or developmental abnormalities, sun exposure to the skin, or reactive changes from previous infections such as insect bites or thorn pricks.⁴ The clinical appearance of the lesion appears as a single, round lesion, appears reddish at first and turns browner or skin-colored as time goes by. The lesion has firm margin, most are painless nodules and there is no tenderness. Asymptomatic solitary tumor, slowly growing, and the size depends on the time of evolution of the lesion. In some cases, BFH get up to large size because did not receive a special treatment.³

The development of Benign Fibroblast Histiocytoma (BFH) to Malignant Fibroblast Histiocytoma (MFH) is still not known, but it is possible due to a history of trauma and chronic infection. Management of BFH can be treated by surgical removal of benign tumors or complete excision. This action has an excellent prognosis compared to the 3 reports that 5% -10% of this lesion can recur because the risk of treatment is incomplete excision.² Radiation therapy and chemotherapy have no role in the management of BFH. The article describes a case of BFH of the buccal mucosa and discusses its clinical and management.

CASE REPORT

A 40-year-old patient came to the Emergency Room at Sultan Fatah Hospital, Demak Regency in May 2023 complaining of swelling on the left cheek and below the eye. The patient had his condition checked at the Community Health Center and he was no longer able to open his mouth, and the dentist advised him to go straight to the emergency room. But the patient did not check his condition at the emergency room and only applied goiter medicine and bought painkillers at the pharmacy. Ten days later, the new patient had his condition checked in the emergency room, because he complained of unbearable headaches, fever for 7 days. Patients eat and drink mashed bread with water or tea. The patient admitted that he had no complaints of cavities, and the patient did not have any systemic or infectious diseases. The patient came in a *compos mentis* state, but the patient was less cooperative.

Vital signs examination showed blood pressure 123/82 mmHg, pulse 77x/min, respiration 24x/min, temperature 36.9C, oxygen saturation 98%. Physical examination of the patient found normal skin, asymmetrical head, normal nose, there was swelling in the left submandibular region, and it extended to the os area. Zygomatic, palpation (+), tenderness (+), trismus (+) unable to open mouth and puncture examination (-). Supporting examination from a panoramic x-ray revealed that there were no visible abnormalities in the soft or hard tissue (Figure 1). So, the provisional diagnosis was found to be an infected buccal tumor.

Management while in the emergency room was given intravenous Ringer's lactate 20 tpm, Ketorolac 1A injection, and Ranitidine 1A injection. Next, the patient was referred to minor surgery for further examination and given medication, namely ceftriaxone, metronidazole, ketorolac, ranitidine and omeprazole for 6 days of preoperative treatment.

By evaluating all examinations, the patient underwent incision and drainage (Figure 2 and 3). The incision is made at a length of approximately 2 cm in the fluctuating area. Then the tissue exploration continued bluntly using bent clamps and continued with taking the tissue for a biopsy examination measuring 1 x 0.4 x 0.3 cm. The action continues with the installation of a Penrose drain (Figure 4). The diagnosis was made based on the results of an incisional biopsy, namely Benign Fibroblast Histiocytoma, where the group of striated muscle cells in the fibrous stromal proliferation did not appear malignant, so this tumor was benign. The patient's follow-up was carried out 7 days after the procedure and it was found that the patient's mouth was open by 1 cm. During follow-up, an affecting drain was also carried out and patient education was carried out (Figure 5).



Figure 1. Radiographic Examination Results



Figure 2. Incision



Figure 3. Drainage



Figure 4. Penrose Drain



Figure 5. Remove Penrose Drain

DISCUSSION

Based on the results of subjective, objective and supporting examinations that have been carried out, the diagnosis in this case is Benign Fibrous Histiocytoma. Benign Fibrous Histiocytoma (BFH) is a benign soft tissue tumor consisting of fibroblastic and histiocytic cells.³ This tumor is most often found in the dermis and subcutaneous tissue. In this case, its surface location showed a completely benign, and the nodule was large, dense, well-defined, and mobile, so that upon histopathological examination, there were obvious fibrous histiocytes. Only excision and biopsy showing the tumor are performed.²

The etiology of oral BFH remains unclear. According to the WHO histological classification of the tumors, BFH is defined as benign lesion with rare mitosis and the absence of cellular atypia and composed of spindle-shaped fibroblasts arranged in a unique storiform pattern with small, multinucleated, osteoclast-like giant cells.⁵ In this case, striated muscle cells can be seen within the fibrous stromal proliferation in contact with lymphocytes and histiocytes. BFH on the oral mucosa is

clinically found to appear as a slow growing and painless mass. Although these lesions do not have any impact on the patient's general health, they can have local effects, for example interfering with the chewing process and pressing or shifting anatomical structures. Multiple BFH may occur due to immunosuppression, but none of the oral BHF's reviewed demonstrated multiple lesions.⁴

The clinical diagnosis of BFH is made by the presence of a growth that enlarges gradually, is well defined and does not show aggressive behavior or damage to the overlying mucosa. Histological examination such as rare mitoses, absence of cellular atypia, presence of histiocytes and chronic inflammatory cell infiltration with hyalinization and myxoid changes make the diagnosis clearer. In this case, the histopathology-anatomy results show that there are groups of striated muscle cells in the proliferation of fibrous stroma interspersed with lymphocytes and histiocytes. There are no signs of malignancy, and it can be called fibroma. The differential histological diagnosis includes Neurofibroma, Leiomyosarcoma and Dermatofibroma which is often called atypical BFH.⁶

In the soft tissues of the oral cavity, the main lesion requiring a histological differential diagnosis of BFH is malignant fibrous histiocytoma (MFH). The histological pattern of MFH is high cell pleomorphism, high mitotic activity, more than 5 per 10 high power fields and infiltration of the capsule and into the surrounding tissue found in MFH. The primary treatment for BFH is surgical excision with or without radical neck dissection. Because the incidence of regional lymph node metastasis is relatively low (4%–17%), elective neck dissection is performed only when there is evidence of metastasis.⁵

The prognosis for BFH is very good when excision is performed, and metastases do not occur. The treatment plan for BFH consists of wide surgical resection as described in the literature, but considering the location (involving the orbital floor) and extent of the lesion. However, in this case the first treatment carried out is a drainage incision which is useful for preventing the spread of infection to other tissues, reducing pain, reducing the number of microbial populations and their toxins and taking biopsy tissue. After obtaining the biopsy results, the patient was advised to undergo excision.

CONCLUSION

Benign Fibrous Histiocytoma is a benign type of neoplasm or tumor. The most common sites are dermis and subcutaneous layers, but few cases have been reported in the oral cavity and maxillofacial. The most often affected locations by BFH lesions are the buccal mucosa, mandibular bones, gingiva, lower and upper lips, soft palate, and floor of the mouth. In this case, the patient came with a condition of trismus and there was a large, solid, well-defined lesion located under the left ear lobule at the left mandibular angle. The results of anamnesis and dental examination, the main etiology of this case was not caused by a tooth infection. The diagnosis is supported by the results of anatomical histopathology

which shows that the fibroma cells are benign and interspersed with lymphocytes and histiocytes. The etiology behind the occurrence of BFH remains incompletely understood. In this case after evaluating from subjective, objective, and supporting examinations, the etiology of the infection is still not known. The treatment of choice was incision and drainage of the infection. However, the ideal treatment for benign tumors is an excisional biopsy

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