

Up-to Date Review And Case Report

Fibromyxoma of mandibular gingiva: a case study

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(Received: 5 October 2016, accepted: 4 January 2017)

Keywords:
fibromyxoma /
odontogenic / gum /
oral surgery

Abstract – Introduction: Fibromyxomas are mesodermal tumors of dental origin. They are infrequent and are often diagnosed incidentally during radiography. **Observation:** A fibromyxoma was discovered in a 27-years-old patient who presented to us for a consultation for a voluminous swelling of the oral cavity which had developed over 2 years. Physical examination revealed anemia and weight loss. Oral examination revealed a voluminous gingival mass that was ulcerated and necrotic in places, with associated bleeding. The treatment consisted of a surgical resection, multiple dental avulsions, and an alveolar curettage. The histopathological examination of the resected lesion revealed an ulcerated gingival fibromyxoma with pathological calcification. **Comments:** Here we report a rare case of a woman with necroinflammatory–hemorrhagic and ulcerated gingival fibromyxoma, which resulted in functional and cosmetic damage, along with a literature review pertaining to this subject. The aggressiveness and the high potential of the maxillary fibromyxoma recurrence suggest that a wide surgical resection is the best treatment option to guarantee a good prognosis. **Conclusion:** The treatment of fibromyxoma requires surgical intervention and the diagnosis is confirmed by a histopathological examination of the resected lesion.

Introduction

Odontogenic fibromyxoma is synonymous with odontogenic myxoma, according to the World Health Organization. It is a benign and rare odontogenic tumor, which is locally invasive of the maxillary ectomesenchyme with or without epithelial induction. It represents 0.04–0.6% oral cavity tumors and 3–7% benign odontogenic tumors [1,2]. The fibromyxoma is located in the mandible and most frequently affects women aged 20–30 years old [3]. The etiology remains indeterminable, but fibromyxoma is believed to derive from embryonic mesenchymal elements of the dental papilla, dental follicle, or periodontal ligament [4]. Fibromyxomas are benign tumors with a strong invasive potential and local aggression [5,6]. Radiological images are not specific enough and only histopathological examinations can confirm the diagnosis. Surgical removal is the treatment of choice [2–6].

Soft-tissue fibromyxomas, in particular, those of the mandibular gingiva are poorly described in the literature. Here we present a case of gingival fibromyxoma located in the mandible for describing the diagnostic aspects and treatment results.

Observation

A 27-year-old patient came in for a consultation for exteriorized gingival swelling in the exobuccal region. The swelling had increased in size over 2 years, was ulcerated, and bled on contact. It was initially localized to the gum and small in size. It then gradually increased volume to become exobuccal. The patient had attempted several traditional treatments (poultice applications and use of mouthwash), but they had no effect on the swelling. Recurring bleeding, difficulty of eating, cosmetic damage, and increase in lesion size had motivated the patient to seek a consultation. She had no medical or surgical history.

The patient arrived at our consultation with her face covered with a piece of cloth to hide her face. She weighed 53 kg (with an ideal weight of 59 kg) and had a conjunctival pallor. The exobuccal examination revealed that she could open her mouth because of a fleshy ulcerative-necrotic mass, which caused partial obstruction of saliva flow. There was no facial or cervical lymphadenopathy, numb chin disorder or associated pain.

In the intraoral examination, the patient had inadequate oral hygiene. This examination has highlighted a voluminous vestibular mass at teeth 34 and 35. It filled the lower labial

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Fig. 1. Extraoral view revealing a huge gingival overgrowth.



Fig. 3. Four days after the surgery.



Fig. 2. Unilocular appearance in the apex region of 34 and 35.

vestibule, crossed the median line, caused contralateral depression of the tongue depression, as well as depression of 31, 32, 33, 41, and 42. The bilobed, pedunculated mass had a firm consistency and bled on contact; it was not fixed to the mandible. The largest lobe was 12 cm in diameter, whereas the second lobe was 4 cm in diameter. The pedicle had a length of 3 cm and a diameter of 1 cm (Fig. 1). Blood tests revealed a hypochromic, microcytic anemia with a hemoglobin level of 6.5 g/dl without leukocytosis.

The X-ray of the skull and the right and left maxillary outlines revealed an incomplete, oval-like, 1-cm-diameter peduncle at the apex of 34 and 35 (Fig. 2).

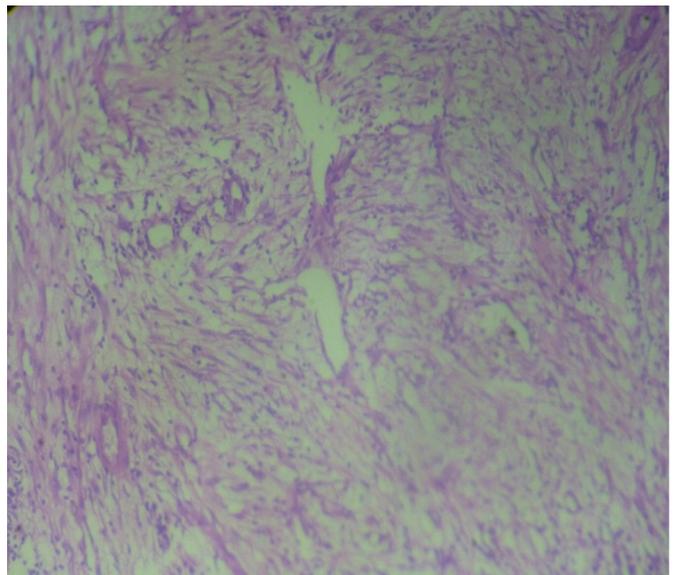


Fig. 4. Fusocellular proliferation within a myxoid stroma (HE staining $\times 250$).

The treatment consisted of a total preoperative blood transfusion of 1500 ml, and tumor resection was performed under general anesthesia. At the same time, the avulsions of the teeth (32, 33, 34, and 35) embedded in the tumor and a careful alveolar curettage was carried out. Hemostasis was satisfactory. Postoperative treatment included a total blood transfusion of 1000 ml, and prescription of a combination of amoxicillin-clavulanic acid (2 g per day for 7 days) and paracetamol (3 g per day for 3 days). In addition, local care consisting of oral rinses with hexetidine (3 times per day) and oral brushing (3 times per day) were prescribed. The surgical procedure was carried out smoothly without complications (Fig. 3).



Fig. 5. One year after the surgery.

The histopathological examination of the region indicated that the cavities were limited by fibrovascular septa containing an abundant myxoid substance. There were also foci of calcifications associated with histiocytes with foamy cytoplasm and giant Muller-like cells. There was neither nuclear atypia nor mitosis. The diagnosis of an ulcerated gingival fibromyxoma with calcium deposition was made (Fig. 4).

After 2 years of follow-up, the patient showed no recurrence (Fig. 5). The patient was referred to a dental practitioner for prosthetic dental rehabilitation.

Discussion

Fibromyxoma is a rare, benign, odontogenic tumor affecting the maxilla. It affects women aged 20–30 years. The clinical data observed are consistent with those found in the literature [3].

Fibromyxomas are more frequently located in the mandible than in the maxilla and are rarely found in the perimaxillary soft tissue [1,7–10]. Studies on fibromyxoma of the maxilla are numerous, but those reporting the details of relationships with the surrounding soft tissues are rare [11,12]. This localization to the gingiva could be explained by the ectomesenchyme from the embryonic remnants of the periodontal ligament.

In addition, because odontogenic fibromyxoma is asymptomatic at first, it can evolve painlessly and reach a significant size if not treated, such as the case reported above. The large sizes of lesions are because of several factors, including ignorance, inadvertent manipulation by traditional practitioners, and delayed consultation. In fact, the patient consulted 2 years after disease onset. The large dimensions of fibromyxoma can cause functional discomfort, cosmetic damage, and recurrent bleeding. This results in symptoms such as difficulty in eating, weight loss, and anemia [13]. These symptoms were also observed in the patient.

The diagnosis of fibromyxoma is confirmed by a radiographic unilocular or multilocular X-ray set within precise boundaries. Radiological investigations can reveal a homogeneous appearance with several features such as “honeycomb,”

“soap bubble,” or “tennis racket” [11,14]. In the case described, the defective technical platform, forced us to use a conventional X-ray. Radiography showed a unilocular X-ray appearance. The appearance of apical alveolar lesions could be explained by the invasive nature of fibromyxoma. These different X-ray appearances of the fibromyxomas pose a diagnostic problem with ameloblastomas, giant cell tumors, and intraosseous hemangiomas, as described in the literature; hence, a histopathological examination that provides confirmation of diagnosis is required [13,15]. The presence of calcifications found in the histopathological examination was also observed by Miettinen *et al.* [12]. These calcifications are specific characteristics of the fibromyxomas and are essential for the differential diagnosis [11,16].

The treatment of fibromyxoma is surgical, consisting of either an enucleation and a curettage, or partial resection of the maxilla. The prevention of a relapse is strongly related to the complete resection of the lesion. The patient should be monitored for at least 2–5 years after surgery because of a high relapse rate of 25% during this period [15,17–19]. For the observed case, because of the location of the soft tissue, we carried out a large resection of the tumor with an alveolar vacuum and the avulsion of the teeth embedded in the tumor. A histopathological examination confirmed the diagnosis.

At the 2-year follow-up, the patient had no relapses. She was referred to a dental practitioner for prosthetic dental rehabilitation.

Conflicts of interests: The authors declare that they have no conflicts of interest in relation to this article

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