

Oral ulceration with bone sequestration - case report

Ulceração bucal com sequestro ósseo - relato de caso

Vinicius C. Carrard*
Guilherme G. Sieck**
Anna Cecília M. Chaves***
Manoel Sant'Ana Filho***
Pantelis V. Rados***

Abstract

This report describes the case of a 38-year-old male patient that presented bilateral ulcerations with bone necrosis in the mandibular lingual area at the level of the mylohyoid ridge for 30 days. The patient reported discrete pain and eventually bleeding. Occlusal radiograph showed bilateral bone exostoses in the lingual mandibular cortical bone. Oral ulceration with bone sequestration diagnosis was based on clinical examination and on occlusal radiograph. The patient was treated with antibiotics, 0.12% chlorhexidine mouthwashes and removal of bone sequestrations. At clinical follow-up at 60 days, it was observed that the region was completely healed. The patient had bruxism, which was diagnosed based on the examination of wear on the surfaces of anterior incisors and on family reports. For this reason, he was referred to a clinical dentist for treatment with an occlusal splint. This is a rare lesion and the recognition of its characteristics is important for an accurate diagnosis and adequate clinical management.

Key words: Bone. Oral ulceration. Oral diagnosis. Infection.

Introduction

Ulcerations in the oral mucosa are common in several pathologic conditions and different etiologic factors such as immunologic, traumatic or even neoplastic^{1,2} may be involved.

This report of a clinical case describes a mucosal ulceration that is associated with bone sequestration. This type of lesion, usually found in the mandibular lingual area, affects deeper tissues and, therefore, has a slow progression^{2,3}. Radiographic studies are not useful in making a diagnosis, except in cases in which occlusal radiographs show small irregular radiopacities that correspond to bone sequestration. Local and systemic factors may make the patient vulnerable to this type of ulceration, which results in ischemic bone necrosis and secondary infection⁴⁻⁶. This is an uncommon lesion and the description of its characteristics is important for an accurate diagnosis and adequate clinical management.

* Ph.D. Student, School of Dentistry – Oral Pathology, Federal University of Rio Grande do Sul, Porto Alegre, Brazil.

** DDS, School of Dentistry – Oral Pathology, Federal University of Rio Grande do Sul, Porto Alegre, Brazil.

*** Ph.D., School of Dentistry – Oral Pathology, Federal University of Rio Grande do Sul, Porto Alegre, Brazil.

Case report

A 38-year-old male patient was referred to the Oral Pathology Service of the School of Dentistry, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil. He had ulcerations with bilateral bone necrosis in the mandible for 30 days, complained of pain, and reported feeling a “tip” causing trauma to the tongue. He reported having filed this tip with a nail file, after which pain and lesion volume increased. The patient had taken amoxicillin (oral, 500 mg, 3 times a day for 10 days), metronidazole (oral, 400 mg, 3 times a day for 10 days) and acetaminophen (oral, 750 mg, 6 times a day for 3 days) and referred hydrogen peroxide mouthwashes use (topical application, twice a day until healing).

Clinical examination revealed exostoses in the lingual mandibular molar area and ulcerations of about 1.5 x 0.7 cm in diameter with exposure of the lingual cortical bone bilaterally (Fig. 1 and 2). Clinical examination and occlusal radiograph (Fig. 3 and 4) showed bilateral bone exostoses in the lingual mandibular cortical bone. A diagnosis of ulceration with bone sequestration was made based on clinical and radiographic findings. Clinical management consisted of maintenance of the treatment with amoxicillin (3 g) every 8 hours, 0.12% chlorhexidine mouthwashes, and acetaminophen (750 mg) every 6 hours. The patient had bruxism, which was diagnosed based on the examination of wear on the surfaces of anterior incisors and on family reports.



Figure 1 - Initial clinical view; exostosis on lingual mandibular cortical bone and ulceration with bone sequestration (right side)



Figure 2 - Initial clinical view; exostosis on lingual mandibular cortical bone and ulceration with bone sequestration (left side)



Figure 3 - Occlusal radiograph, exostosis and lingual cortical bone rupture



Figure 4 - Clinical view of exostosis (right side)

In the second visit (7 days), the free bone sequestrations were removed because they were mobile. In the control visit (15 days), the patient showed clinical improvement, and medication was discontinued. The patient was referred to a clinical dentist for the treatment of bruxism with the use of an occlusal splint. At 30 days, the region was almost healed (Fig. 5 and 6). At clinical follow-up at 60 days, the region was completely healed.



Figure 5 - Follow-up (30 days) almost complete mucosal healing (right side)



Figure 6 - Follow-up, 30 days, almost complete mucosal healing (left side)

Discussion

Ulceration with bone sequestration is a rare lesion, and, therefore, understanding its characteristics is fundamental for an accurate diagnosis. This type of ulceration affects the mandibular lingual area at the level of the mylohyoid ridge, and often presents exostoses associated with bruxism⁴. The trauma resulting from local and systemic factors causes ischemia in this region and results in ulceration and bone necrosis³⁻⁷.

Lingual inclination of posterior teeth protects the masticatory mucosa of posterior region of man-

dibles from masticatory trauma. However, exostoses, missing teeth or restorations that change this inclination may predispose to chronic trauma^{3,4}. Also, the mylohyoid ridge is less exposed to cleaning by the movements of the anterior portion of the tongue, which favors greater accumulation of bacteria and food rests and contributes to secondary infection^{2,8,9}.

The mandibular cortical bone, particularly in patients with exostoses, is very distant from the blood supply of alveolar arteries. Also, the periosteum vascularization is poor because of the small amount of connective tissue, which may easily rupture because of a lesion. These factors determine not only the occurrence of lesions, but also a prolonged healing time^{4,8-10,11}.

The clinical management of this lesion consists of control of secondary infection by using antiseptic mouthwashes and systemic antibiotics. Bone sequestrations may exfoliate spontaneously or be removed surgically, after which the ulcerative lesion heals^{2,3,5,12}. Because of the poor vascularization in this anatomic site, complete healing may take from one week to several months^{4,8,9,13}.

If the lesion does not heal after the measures suggested here are taken, a complete blood workup should be performed to rule out systemic problems that may lead to healing delay. Some of these systemic conditions are anemia, neutropenia, diabetes and aids^{2,14}. When any of these conditions is found, treatment of the systemic problem should be administered in addition to specific local treatment^{2,6}.

Predisposing factors should also be treated, either by manufacturing dental appliances, in the case of dysfunction, or by correction of restorations, which may reduce susceptibility to food impaction and trauma in the region. There is no consensus in the literature about surgical correction of exostosis because some authors report the possibility of bone necrosis resulting from the surgical procedure².

An association between exostosis and craniomandibular dysfunctions, such as bruxism, has been demonstrated^{4,15}. Therefore, the treatment of dysfunctions is indicated to prevent the recurrence of exostosis and ulcerations^{2,4}. Our patient was seen by a clinical dentist for treatment with an occlusal splint, and is currently being followed up.

Final considerations

This rare case of oral ulceration with bone sequestration presented classical clinical and radiographic features. This knowledge is important in order to establish the proper treatment, that includes the infection control and bone sequestration removal when it was mobile^{2,4,6,9}. In addition, the predisposing factors should be controlled to avoid recurrences².

Resumo

Este estudo relata o caso de um paciente do gênero masculino, 38 anos de idade, que apresentava úlceras bilaterais com necrose óssea na região lingual da mandíbula no nível da linha miloioidea há trinta dias. O paciente relatava dor discreta e sangramento eventual. A radiografia oclusal mostrava exostoses ósseas bilaterais na cortical óssea lingual da mandíbula. O diagnóstico de úlcera com sequestro ósseo baseou-se no exame clínico e na radiografia oclusal. O paciente foi tratado com antibióticos, bochechos com clorexidina a 0,12% e remoção dos sequestros ósseos. Após sessenta dias, na consulta de proervação, observou-se que a região estava completamente cicatrizada. O paciente apresentava bruxismo, o qual foi diagnosticado pela observação de facetas de desgaste nos incisivos inferiores e por meio de entrevista com os familiares. Em razão disso, o paciente foi encaminhado para um clínico geral para que fosse realizado um tratamento com placa miorrelaxante. Essa lesão é rara e o reconhecimento de suas características é importante a fim de que se realize o diagnóstico preciso e o tratamento apropriado.

Palavras-chave: Osso. Úlcera bucal. Diagnóstico bucal. Infecção.

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Correspondence

Pantelis Varvaki Rados
Rua Ramiro Barcelos, 2492/503, Bairro Santana
90035-003 Porto Alegre - RS, Brasil
Fone: (51) 3308 5011 Fax: (51) 3308 5023
E-mail: pantelis@ufrgs.br

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