



Clinical Case

Focal osteoporotic bone marrow defect with unusual presentation

Naíza M. Medeiros Abrahim^a, Silvia Cristina Oliveira Brandão^a, Jeconias Câmara^a, Valber B. Martins^b, Lucileide Castro de Oliveira^a, Tatiana Nayara Libório-Kimura^{a,*}

^a Department of Pathology and Legal Medicine, Federal University of Amazonas, Manaus, AM, Brazil

^b State University of Amazonas, Manaus, AM, Brazil

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ABSTRACT

Focal osteoporotic bone marrow defects are rare conditions of the jaws, appearing normally as asymptomatic radiolucent lesions in posterior mandible of middle-aged women. A 52-year-old woman presented an extensive and symptomatic well defined hyperdense lesion in maxilla that was protruding into the right maxillary sinus. The lesion was totally excised and the association of histopathological and clinical features led to the diagnosis of focal osteoporotic bone marrow defect associated to osseous repair. The present case has some particularities as an unusual site, image exam's appearance and the presence of swelling and pain, which are not commonly reported in literature.

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Defeito osteoporótico focal da medula óssea com uma apresentação incomum

RESUMO

Defeitos osteoporóticos focais da medula óssea são condições raras nos maxilares, aparecem normalmente como lesões radiolúcidas assintomáticas em região posterior de mandíbula em mulheres de meia-idade. Uma mulher de 52 anos de idade apresentou uma extensa lesão hiperdensa bem definida e sintomática em maxila, a qual se estendia para dentro do seio maxilar direito. A lesão foi excisada completamente e a associação dos aspectos clínicos e histológicos levou ao diagnóstico de defeito osteoporótico focal da medula óssea associada a áreas de reparo ósseo. O presente caso possui algumas particularidades como sítio incomum, aparência nos exames de imagem, bem como presença de aumento de volume e dor, os quais não são comumente reportados na literatura.

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Palavras-chave:

Medula óssea

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* Corresponding author.

E-mail address: tliborio@ufam.edu.br (T.N. Libório-Kimura).

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Introduction

Foci of hematopoietic marrow that persist into adulthood in certain areas of the jaws, is usually restricted to the condylar process, angle of the mandible, and the maxillary tuberosity.^{1,2} The focal osteoporotic bone marrow defect (FOBMD) is a rare condition of the jaws, and has been reported since 1954, by Cahn, who described variations of the normal location of bone marrow within the jaws present as focal defects.²

The etiology of the FOBMD is still unknown and it is reported that it may be caused by situations such as: (a) persistence of fetal marrow; (b) altered repair of bone trabeculae in area of trauma or inflammation; (c) an increased systemic need for blood cells that stimulates the development of hematopoietic bone marrow foci or (d) an ischemic change of the bone marrow tissue.^{3,4}

The radiographic appearance of these defects is not sufficiently characteristic to permit an exact diagnosis. However, a radiolucent lesion with either distinct or poorly defined irregular borders, located in the posterior mandible of a middle-aged woman should suggest an FOBMD.¹ It's asymptomatic fortuitously discovered and may be associated with local pain and swelling. A definite diagnosis requires microscopic examination of the tissue. Microscopic findings including cellular hematopoietic bone marrow, fat cells and trabeculae bone and no treatment is necessary.¹⁻⁵

In this article, we report a case of FOBMD in a 52-year-old Brazilian woman who presented an extensive and symptomatic well defined hyperdense lesion located in right maxilla.

Case report

A 52-year-old female patient was referred to a Buco-Maxilo-Facial Center, complaining of a difficult in maxillary prosthesis's adaptation due to a painful one-year-swelling of the maxilla. Intraoral examination revealed a swelling on right alveolar ridge, with hardened consistency (Figure 1). No systemic disorders were recorded on her medical history. Cone beam computed tomography showed a 2.5 cm × 2.3 cm extensive well defined hyperdense lesion, with hypodense areas, similar to bone tissue in pre-molar and molar edentulous right



Figure 1 – Clinical aspect: swelling on right alveolar ridge.

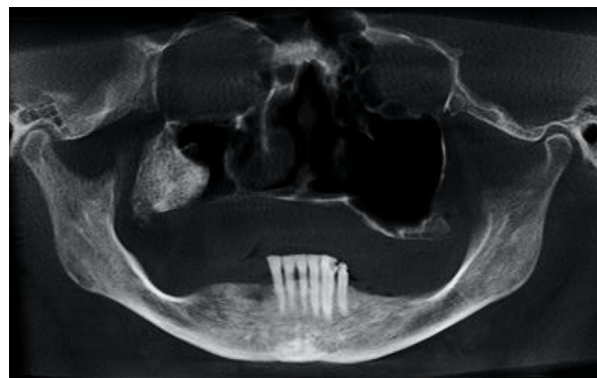


Figure 2 – Image exam of the lesion: computed tomography scan panoramic view showing extensive hyperdense lesion with hypodense areas.

region, growing into maxillary sinus (Figure 2). The main part of the lesion was protruding into the right maxillary sinus (Figure 3).

Under local anesthesia, an incisional biopsy was performed in the posterior alveolar ridge of the first quadrant of the maxilla. Four fragments of tissue were removed and fixed in 10% formalin for examination. On The specimens had a brownish coloration with a hardened calcified aspect. The smallest fragment measured 0.1 cm × 0.1 cm × 0.2 cm and the biggest fragment measured 0.2 cm × 0.2 cm × 0.4 cm. Microscopic examination revealed tissue fragments with the presence of a trabecular bone arranged on plates and fibrovascular connective tissue between them. Even though the fragments removed were not representative, the preliminary diagnosis was suggestive of osteoma or fibro-osseous dysplasia. However, the final diagnosis could only determined with an excisional biopsy.

Under general anesthesia with endotracheal intubation, the lesion was then completely removed with a peripheral



Figure 3 – Image exam of the lesion: computed tomography scan with axial view, showing lesion protruding into the right maxillary sinus.

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