Journal of Oral and Maxillofacial Surgery, Medicine, and Pathology 26 (2014) 535–539

Contents lists available at ScienceDirect

Journal of Oral and Maxillofacial Surgery, Medicine, and Pathology

journal homepage: www.elsevier.com/locate/jomsmp

Case report

Florid osseous dysplasia: A case report and literature review

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ARTICLE INFO

Article history:
Received 21 January 2013
Received in revised form 2 May 2013
Accepted 13 June 2013
Available online 12 July 2013

Keywords:
Florid osseous dysplasia
FOD
Osseous dysplasia
OD

ABSTRACT

Florid osseous dysplasia (FOD) is one of the osseous dysplasias, which are characterized by the replacement of normal bone by fibrous tissue and metaplastic bone. It is particularly common in the jaws of middle-aged black women. In some cases, a familial trend can be observed. FOD is usually asymptomatic and, in such cases, the lesion is detected when radiographs are taken for some other reason. In severe cases, focal expansion may occur owing to infection, which may lead to pain and facial deformity. FOD is often symmetrically located in various regions of the jaw. Symptoms are almost always associated with infection. Radiographically, it appears predominantly radiolucent, predominantly radiodense or mixed and tends to increase with time. Histopathologically, FOD consists of cellular fibrous tissue, woven as well as lamellar bone and masses of cementum-like material. FOD must be differentiated from other osseous dysplasias, other benign fibro-osseous lesions such as ossifying fibroma, fibrous dysplasia, chronic diffuse sclerosing osteomyelitis, and Paget disease of bone, on the basis of combined clinical, radiographic, and histological features. The case of FOD described here occurred in a 77-year-old Japanese female patient, which is rare with regard to race and age. In this case, the patient suffered facial asymmetry due to mandibular infection, so surgical enucleation of sequesters and curettage were performed. Close and long-term monitoring of a patient like this is necessary to prevent recurrence of infection and secondary complications.

1. Introduction

Florid osseous dysplasia (FOD), which was first described by Melrose in 1976, is a rare benign lesion [1]. The etiology of this lesion of the jaw is unknown [2–5], but it appears to represent reactive or dysplastic processes originating from elements of the periodontal ligaments [6–8]. This lesion is most commonly found in middle-aged black women, although it may also occur in Caucasians and Asians [3,9,10]. Sanjai et al. described in detail the frequency of occurrence; it is seen with a male:female ratio of 1:1.26, and the proportions in different ethnic groups are as follows: blacks (78%), whites (5%), and Asians (4%) [11]. In some cases, a familial trend can be observed [6,12–14]. FOD is usually asymptomatic and, in such cases, the lesion is detected when radiographs are taken for some other reason [2,3,15,16]. In severe cases, focal expansion may occur owing to infection, which may lead to pain and facial deformity [16]. Symptoms are almost always associated with exposure of sclerotic calcified masses in the oral cavity [3].

Radiographically, this lesion appears as multiple sclerotic masses, located in two or more quadrants, usually in the tooth-bearing regions [15]. Radiodensity tends to increase with time. In the mixed or radiodense stage of osseous dysplasia (OD), a radiolucent halo usually separates the lesions from the surrounding bone and the root surface [17]. Histopathologically, all types of OD consist of cellular fibrous tissue, woven as well as lamellar bone and masses of cementum-like material. FOD is a benign fibro-osseous lesion that must be differentiated from other benign fibro-osseous lesions such as ossifying fibroma (OF), fibrous dysplasia (FD) [2,17] and other lesions, such as chronic diffuse sclerosing osteomyelitis and Paget disease of bone, on the basis of combined clinical, radiographic, and histological features.

Although in most situations the lesion is not treated, treatment is required when infection of the lesion occurs [2,3,7]. This secondary infection usually results from trauma to the area [7]. The avascular nature of the lesion contributes to susceptibility toward a more severe infection, delayed sequestration, and osteomyelitis.

☆ AsianAOMS: Asian Association of Oral and Maxillofacial Surgeons; ASOMP: Asian Society of Oral and Maxillofacial Pathology; JSOP: Japanese Society of Oral Pathology; JSOMS: Japanese Society of Oral and Maxillofacial Surgeons; JSOM: Japanese Society of Oral Medicine; JAMI: Japanese Academy of Maxillofacial Implants.

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2212-5558/$ – see front matter
http://dx.doi.org/10.1016/j.ajoms.2013.06.001

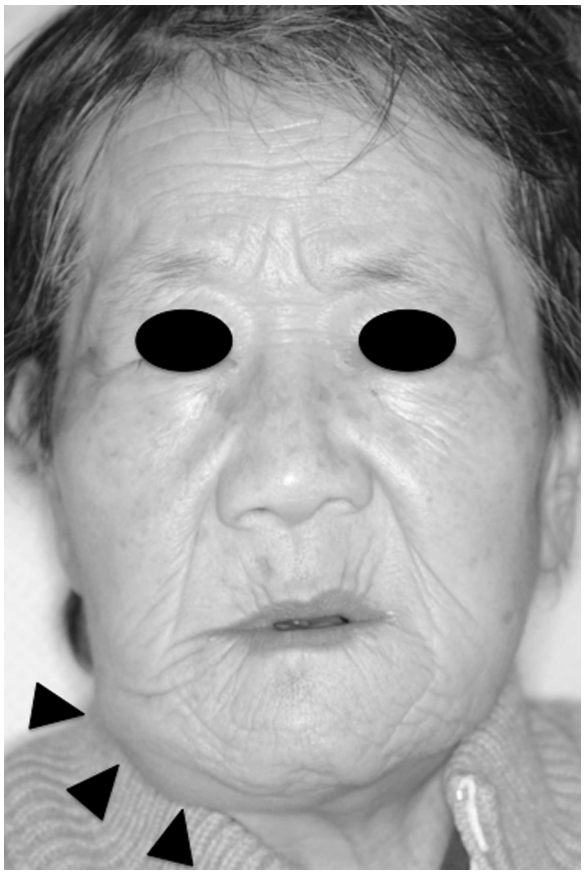

Fig. 1. Extraoral findings revealed a bony swelling without pain in the region of the right mandibular body (arrowhead).

We report here the case of a patient who was diagnosed with FOD on the basis of clinical, radiographic, and histological findings.

2. Case report

A 77-year-old Japanese female patient was admitted to our Oral and Maxillofacial Department, Tottori University, Japan, because of her concern about a swelling without pain in the right mandible that had been present for 1 month. The patient's medical history had nothing of note. Her elder brother had suffered from mandibular tumor, about which no detailed information was available, and had died 30 years before. Extraoral examination revealed a bony swelling (arrowhead) in the region of the right mandibular body (Fig. 1). Paresthesia of inferior alveolar nerve was undetectable on both sides. In the intraoral examination, poor condition of oral hygiene and expansive bony swelling between regions from the right mandibular permanent third molar to the left first molar were noted. The wide expansion was firm on palpation. All remaining teeth were vital as determined by electric pulp test, but pus discharge was revealed from a marginal pocket of the right canine tooth. There was severe mobility at right central and lateral incisors. Examination of panoramic radiograph indicated multiple radio-opaque and radiolucent areas in both sides of the maxilla and the mandible (arrowhead) (Fig. 2). Every quadrant was affected. There was radio-opacity with an impacted tooth in the right maxilla. There were radio-opaque masses peripherally lined by a radiolucent layer at the left maxilla and the right mandible, which were reminiscent of sequesters. Computed tomography images also revealed mixed radio-opaque and radiolucent areas in the bilateral maxilla and mandible. Bilateral mandible showed

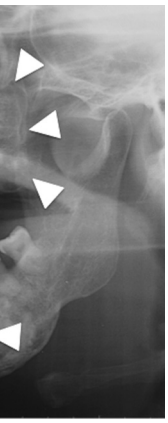

Fig. 2. Panoramic radiograph indicated multiple radio-opaque and radiolucent areas in the symmetrical maxilla and mandible (arrowhead).

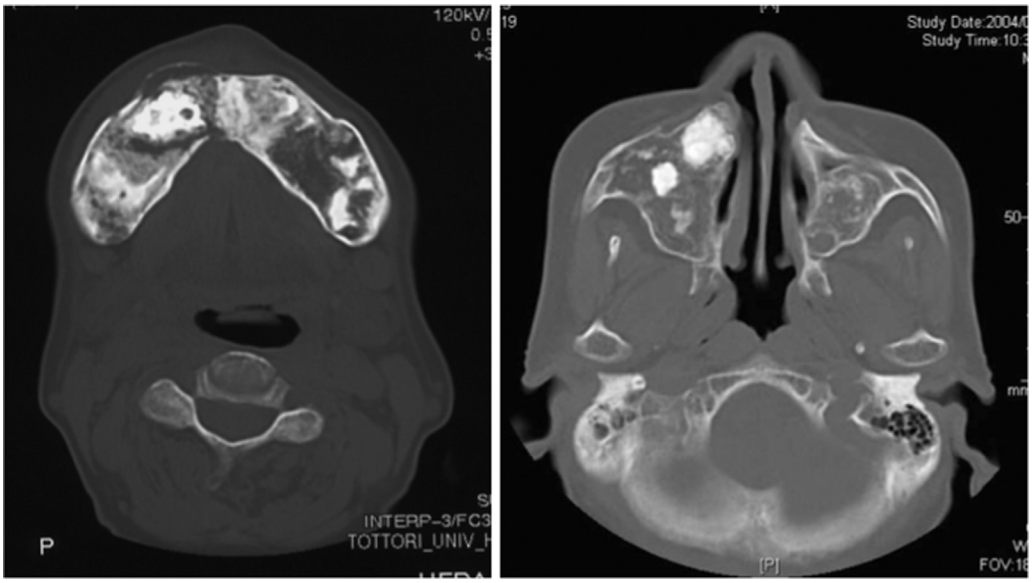

Fig. 3. Computed tomography images revealed buccal-lingual bony expansion of bilateral mandible and radio-opaque masses peripherally lined by a radiolucent layer at right mandible and left maxilla. Both sides of maxillary sinuses were filled with bony lesion.