

## Short communication

# Non-surgical management of stage 3 bisphosphonate-related oroantral fistula

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## Abstract

We describe the case of a patient with an oroantral fistula that healed successfully after conservative treatment.

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## Introduction

Biphosphonate-associated osteonecrosis of the jaw is defined as an area of exposed bone in the maxillofacial region, after identification by a health care provider, in a patient who is receiving or has been exposed to a bisphosphonate and has not had radiation therapy to the craniofacial region.<sup>1</sup>

In 2003 Marx reported 36 cases of osteonecrosis of the jaw associated with the use of zoledronate and disodium pamidronate given intravenously, and with bisphosphonates (alendronate, risedronate, and ibandronate) given orally.<sup>2</sup>

A study of 225 patients showed that in 115 cases the most common symptom of osteonecrosis was pain ( $n=94$ ), followed by purulent discharge ( $n=10$ ), oroantral fistula ( $n=7$ ), swelling ( $n=3$ ), and fever ( $n=1$ ). In 14 patients the osteonecrosis was asymptomatic and was discovered only at routine testing.<sup>3</sup>

## Case report

A 53-year-old white female patient who had had a diagnosis of metastatic carcinoma of the breast of the spine since 2006 was treated with a 4-month cycle of anthracycline chemotherapy and a simultaneous course of radiotherapy. She was prescribed sodium clodronate orally (Bonfos<sup>®</sup>, Boehringer Ingelheim), and in May 2007 this was changed to ibandronate 50 mg/day.

In January 2009 she was referred to the maxillofacial unit as she had developed exposed bone and an extensive oroantral fistula of the left maxilla after extraction of the upper left first and second premolar teeth in April 2008, and the upper left canine in December 2008 (Fig. 1).

Computed tomography (CT) in February 2009 confirmed extensive osteonecrosis of the left side of the hard palate, and the medial and inferolateral walls of the maxillary sinus (Fig. 2).

The extensive oroantral fistula was grossly infected and, in view of her medical condition, conservative management was instituted.

She was prescribed clindamycin 300 mg three times daily for 7 days, and commenced mouth washes with 6% hydrogen peroxide and povidone-iodine four times a day for 3 months. This non-operative management resulted in the shedding of sequestra, and complete closure of the fistula (Fig. 3).

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Table 1

The staging system and treatment protocol for bisphosphonate-related osteonecrosis of the jaws (BRONJ) proposed by the American Association of Oral and Maxillofacial Surgeons (AAOMS).

Staging of BRONJ		Treatment
1	Exposed, necrotic bone; asymptomatic patient; no infection	Antimicrobial rinses (0.12% chlorhexidine); no surgical intervention
2	Exposed, necrotic bone; symptomatic patient (experiencing pain); infection	Antimicrobial rinses (0.12% chlorhexidine); systemic antibiotics or antifungals (infections may exacerbate BRONJ); analgesics
3	Exposed, necrotic bone; symptomatic patient (experiencing pain); infection. One of: pathological fracture, oral cutaneous fistula, or osteolysis extending to the inferior border of the mandible	Antimicrobial rinses (0.12% chlorhexidine); systemic antibiotics or antifungals (infections may exacerbate BRONJ); analgesics; surgical debridement or resection



Fig. 1. Patient with complete oroantral fistula in January 2009.



Fig. 3. Oral cavity at 3 months showing complete closure of the oroantral fistula.

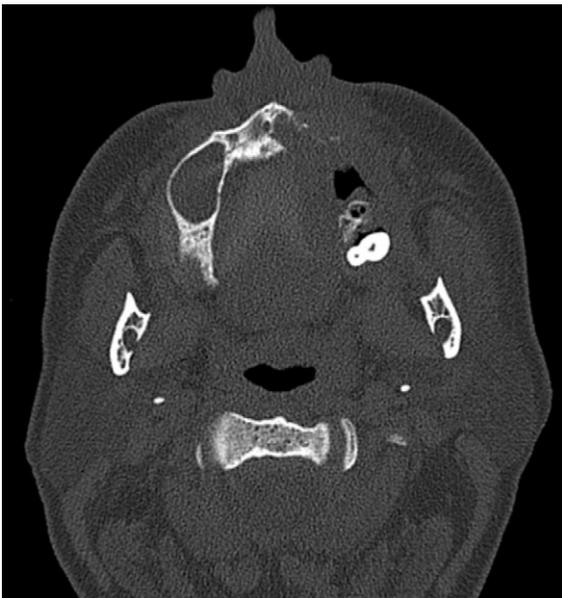


Fig. 2. Computed tomogram at presentation showing extensive osteonecrosis and sequestration of the left maxilla.

**Discussion**

Our patient’s clinical condition was assessed as stage 3 for which the American Association of Oral and Maxillofacial Surgeons (AAOMS) has advocated aggressive surgery (Table 1), but this case has shown that conservative management can result in complete closure of an oroantral fistula.

**References**

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