

# Experience of pain in a patient with BRONJ

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## Dear editor

We read with great interest the case report concerning a patient with bisphosphonate-related osteonecrosis of the jaw (BRONJ) reported by Manzon et al.<sup>1</sup> In this report, they describe BRONJ complicated by a temporal abscess in an elderly woman with rheumatoid arthritis. We congratulate Manzon et al on their successful treatment of this patient. They briefly discussed the evidence for the relationship between bisphosphonate therapy and BRONJ, and the effects of co-occurring factors, such as rheumatoid arthritis, dental surgery, and concomitant corticosteroid therapy.

We would also like to add our experience of treating pain in a patient with BRONJ. A 71-year-old woman weighing 50 kg was referred to our hospital in February 2015 with difficulty opening her mouth, trismus, fever, headache, and severe pain. The patient's past medical history was relevant for rheumatoid arthritis, treated from 1995 with methotrexate, leflunomide, daily oral calcium, and vitamin D3 for 20 years and oral prednisone 0.1 mg/kg was added for the last 10 years. After a vertebral fracture caused by severe osteoporosis, the patient started treatment with alendronate sodium 10 mg daily in tablet form.

In March 2014, the patient underwent a lower right first molar extraction following development of an abscess. The patient had a noticeable right-sided mandibular abscess with a right-sided soft temporal swelling and redness, and severe pain on mouth opening. Oral examination revealed an abscess in the posterior mandible, in the area of the recent extraction, with pus leaking from the previous surgical site. Infection and swelling was extending distally to the lower right first molar.

We examined the patient and detected no laboratory abnormalities in liver and kidney function. She reported that her pain persisted throughout the day and that she was unable to eat due to pain. We ordered paracetamol 10 mg/kg intravenous and tramadol 1 mg/kg intravenously, four times daily. At the end of the 1st day, her pain resolved and she was able to return to her daily routines.

The etiopathogenic mechanism of BRONJ remains unclear, and no universally accepted therapeutic protocol is known to eradicate it; however, the treatment goal should be focused on eliminating pain and preventing progression to bone infection and necrosis.<sup>2</sup> Rheumatoid arthritis is considered an important contributing factor for BRONJ, even though the relationship between the two diseases is not yet fully understood. Bone tissue damage and bone loss are typical features of rheumatoid arthritis.<sup>3</sup> Osteonecrosis may develop for local or multifocal reasons. Malnutrition and general malaise can be found due to pain in elderly patients with BRONJ. These patients must be carefully evaluated, and weak narcotics like tramadol can be used safely.

## Disclosure

The authors report no conflict of interest in this communication.

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## Authors' reply

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## Dear editor

We are pleased to note that our case report has generated interest among readers. The case described in the letter by Bakal et al is very similar to the one we have previously described.<sup>1</sup> They also document the case of a long-term sufferer of rheumatoid arthritis who developed bisphosphonate-related osteonecrosis of the jaw (BRONJ) after a dental extraction. Once again it is emphasized that orally administered bisphosphonates may increase the risk of BRONJ in patients on treatment with immunosuppressant agents such as corticosteroids or methotrexate. Both these cases allow us to hypothesize that routine dental

procedures (ie, dental extractions) may trigger BRONJ in at-risk individuals.

The link between BRONJ and rheumatoid arthritis remains poorly understood.<sup>1-3</sup> We hypothesize that both etiological and treatment-related factors are involved.<sup>2,3</sup> Bone tissue damage and bone loss due to chronic inflammation are among the typical features of rheumatoid arthritis. Glucocorticoids and methotrexate, usually used as first-line therapy in patients with rheumatoid arthritis, and reduced mobility are also well known risk factors for osteoporosis in these patients. The current literature suffers from a lack of reports documenting the incidence of BRONJ in patients presenting with at-risk conditions or undergoing dental procedures. Clinical case-control investigations are needed to assess the incidence of BRONJ in such patients, in order to optimize management of the risk of BRONJ.

## Disclosure

The authors report no conflicts of interest in relation to this communication.

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