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Editorial:

OSTEONECROSIS AND BISPHOSPHONATES.

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Spanish version

Bisphosphonates are a family of drugs used in the treatment and prevention of post-menopausal osteoporosis and that induced by corticoids, in Paget's disease and hypercalcaemia associated with neoplasia. They are also indicated in the treatment of osteolytic lesions and the pain caused by them. For this reason, they are widely used drugs in Haematology for patients diagnosed with Myeloma. The most common bisphosphonates used in this disease are pamidronate and zoledronic acid.

The mechanism of action of the bisphosphonates is based on their binding with hydroxyapatite which in turn inhibits ostoclastic bone resorption. Berenson[1] observed that the use of pamidronate improved survival and decreased bone complications. This and other studies[2, 3] were carried out to support the indefinite use of bisphosphonates.

Mandibular osteonecrosis has been reported as one of the secondary effects of bisphosphonates. In 2003, the first possible association between treatment with bisphosphonates and the appearance maxillary avascular necrosis was reported[4]. A series of risk factors have been described for the appearance of complications. A history of radiotherapy, the use of corticoids or treatment with thalidomide and dental manipulation appears to be involved as triggering factors in the majority of cases. The risk of osteonecrosis increases with dental extractions and poor oral hygiene, in such a way that on the bone being exposed to the flora, it becomes super-infected producing pain, inflammation, infection with suppuration and, finally bone necrosis.

There is no effective treatment for mandibular osteonecrosis, therefore it is a cause of increased morbility in patients. As an effective treatment has not been established, microbiological studies must be carried out and the use of antibiotics is recommended for treating the infections (amoxicillin combined with clavulanic acid in the case of normal flora), along with mouthwashes with 0.12% chlorhexidine. In patients in whom conservative treatment has not been effective, surgical intervention must be planned to remove the area of necrotic bone[5].

Since mandibular osteonecrosis was first described, more than 400 cases have been notified, which has led to a review of the concept of indefinite treatment, a maximum of 2 years of bisphosphonates treatment currently being recommended in patients with Myeloma.

As has happened with other drugs, this secondary effect was not detected in clinical trials, being notified later when a higher number of patients had been subjected to treatment. In September 2004 the pharmaceutical laboratory that marketed pamidronate and zoledronic acid issued a letter

including avascular necrosis as a possible secondary effect.

As a result of the notification of cases of osteonecrosis in patients with Myeloma treated with bisphosphonates, several committees made up of expert panels have issued a series of recommendations for the prevention, diagnosis and treatment of osteonecrosis[6]. Patients with Myeloma who are going to receive treatment with bisphosphonates must always be informed of the possibility of this secondary effect occurring. It is essential that the Odontologist carries out an evaluation of the patient who is going to receive treatment with bisphosphonates, and during the treatment periodic visits must be made to treat caries and periodontal diseases.

It is also essential that all Haematologists have sufficient information about this complication to prevent it, and in cases of the suspected appearance, act rapidly to reach a correct diagnosis and apply the ideal treatment.

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