



Enlarging palatal defect secondary to invasive microbial infection vs. bisphosphonate-related maxillary osteonecrosis in a 60-year-old guamanian male patient: A diagnostic challenge



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Abstract

Osteonecrosis is a common disorder that is a result of collapse of architecture of the bone, determining severe anatomic alterations of the involved site. Osteonecrosis is not a primary disease entity, but rather is a final common pathway secondary to a number of conditions ultimately leading to disturbance in bone remodeling which may potentially lead to bone death. This ischemic bone disease has multifactorial etiologies such as viral, mycotic or bacterial infections, radiotherapy, immunologic diseases and malignancies. However, recent studies prove that most cases of osteonecrosis were iatrogenic. The common sites of osteonecrosis include subarticular avascular necrosis of the femoral head and osteonecrosis of the mandible or maxilla.

Bisphosphonates are generally prescribed in the prevention and treatment of resorptive bone diseases such as osteoporosis and bone metastasis associated with breast and prostate cancers. They are also recognized as an effective therapy for chronic renal disease in patients undergoing hemodialysis that may have renal osteodystrophy. Osteonecrosis of the maxilla in patients treated with bisphosphonates is a relatively rare but well-known complication which has shown an increasing interest by dental practitioners and maxillofacial surgeons. It is defined as an area of exposed bone in the maxillofacial region that does not heal within eight weeks in a patient receiving bisphosphonate medication and has not had any history of radiation to the head and neck region. Since the primary mechanism of bisphosphonate is to inhibit osteoclast function by different mechanisms, altered bone remodeling is the leading hypothesis for bisphosphonate-related osteonecrosis of the jaw. Bacterial contamination may also play a role in maintaining osteomyelitic wounds. We present a case of a 60-year old patient, known to have diabetes and end-stage renal disease on hemodialysis and bisphosphonate therapy, with an aggressive course of palatal necrosis despite intensive diagnostic evaluation, multidrug treatment and surgical management.



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