



MULTIPLE VERTEBRAL FRACTURES SECONDARY TO IRREGULAR USE OF DENOSUMAB

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BACKGROUND

Denosumab is a fully monoclonal antibody used to treat osteoporosis by blocking the binding between a receptor on the osteoclast surface (RANK) and its cytokine (RANKL), inhibiting osteoclast formation, function and survival. Consequently, bone resorption slows, decreasing the risk of bone fractures. Despite of that, inadvertent discontinuation of the drug may increase the risk of fractures. It is known that denosumab does not incorporate into bone matrix. That is why, after suspended, its effects are reversible. Even further, a severe rebound effect may occur - with rapid increases in bone resorption - if a medication dose is delayed for a few months, putting the patient in a raised risk of bone fracture. The following case report is about a patient who progressively delayed doses of denosumab, culminating in extensive vertebral fractures.

CASE REPORT

A 57-year-old woman with history of osteoporosis was in use of denosumab for the last 3 years. In the first year of treatment, patient made regular use of the medication, respecting the correct interval between doses. In the next year, there were consecutive delays in administering the drug (1 to 2 months late). After a 9 months pause, patient presented acute inflammatory low back pain. There was no report of trauma. Magnetic resonance imaging revealed vertebral collapses in T6, T7, T8, T9, T10, L1 and L2. As described in literature, patient presented fragility fractures after irregular use of denosumab.

CONCLUSION

Denosumab is an important and effective option in the treatment of osteoporosis. The drug discontinuation, on the other hand, even if for a short period, may result in bone loss and structural damage. The rheumatologist should alert the patient to this fact and maintain strict control of the medication schedule. If irregular use of denosumab is noticed, a bisphosphonate or another antiresorptive agent should be promptly initiated.