

FEMORAL FRACTURE DURING DENOSUMAB THERAPY IN A PATIENT WITH POSTMENOPAUSAL OSTEOPOROSIS AND RHEUMATOID ARTHRITIS: A CASE REPORT

**Adelmo Šegota, Davor Štefanac, Emanuela Lacmanović,
Tea Schnurrer-Luke-Vrbanić**

Clinical Hospital Center Rijeka, Croatia
e-mail: adellmos@yahoo.com

Background

Postmenopausal osteoporosis is a common cause of fractures in the elderly population. Denosumab is a highly effective antiresorptive agent that significantly reduces the risk of osteoporotic fractures. However, spontaneous fractures may still occur during therapy, particularly in complex patients with multiple comorbidities. This report presents a patient with longstanding postmenopausal osteoporosis, who despite being on denosumab therapy, sustained an atypical femoral fracture.

Case report

A 71-year-old female patient diagnosed with postmenopausal osteoporosis has been treated with risedronate (2011-2021) and teriparatide (2021-2023). In February 2024, she began denosumab therapy (60 mg subcutaneously every 6 months), with optimal calcium and vitamin D supplementation. Regular follow-up with a physiatrist was conducted due to stable vertebral fractures at Th11, Th12 and L3. Since 2022, the patient has been receiving methotrexate treatment (15 mg once weekly) for rheumatoid arthritis. In March 2025, due to a fall, the patient sustained fractures of the third to fifth metatarsal bones in her right foot. One month later, while walking on flat ground and without any trauma, she experienced pain in her left thigh. A femoral diaphyseal fracture was diagnosed and internal fixation was performed using a long gamma nail. After acute care at the Traumatology Department, the patient was transferred to the Physical and Rehabilitation Medicine Department for inpatient rehabilitation and further evaluation of the fracture's etiology.

Conclusion

This case highlights the importance of vigilant monitoring in patients on long-term antiresorptive therapy, especially those with rheumatologic comorbidities. Despite appropriate supplementation and treatment, atypical fractures may still occur in complex patients, requiring comprehensive physiatric and multidisciplinary evaluation.

Keywords: Osteoporosis, Atypical bone fracture, Denosumab