

# ATYPICAL FEMUR FRACTURE REHABILITATION - CASE REPORT

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## Background

Postmenopausal osteoporosis is a metabolic disease characterized by mineral density loss and bone architecture alteration with the consequent possibility of vertebral and non-vertebral fractures. Commonly used medications are bifosfonates, which suppress osteoclastic activity. The prolonged use of bisfosphonates (> 5 years) is associated with an increased incidence of atypical femoral fractures, possibly due to excessive suppression of bone remodeling. Surgical treatments include open and closed reposition, and internal fixation. The rehabilitation goals include pain reduction, complications prevention, mobility and strength improvements, and functional recovery

## Case report

Patient A.N., born in 1973, from Sarajevo, with a negative personal and family medical history, was diagnosed with menopause at the age of 35 with consequent osteoporosis treated with bisphosphonates, not taken for several months. Hospitalized at Orthopedics Department on 13.09.2023, due to a left femoral condylar fracture sustained after fall, and admitted to rehabilitation treatment on 02.02.2024, at the orthopedist recommendation. Radiological verification showed an atypical subtrochanteric low-energy fracture - iceberg type. Operated on 14.10.2023 (Op. Osteosynthesis partis proximalis femoris l. sin. cum femoral nail), after which undergoes outpatient physical treatment based on kinesitherapy and magnetotherapy, enabling walking with one crutch with a full support on the left leg. Left leg muscular hypotrophy remains. Control RTG shows inadequate fracture healing. In the follow-up examination (04.06.2024), the patient complains of left hip and inguinal region soreness. Radiological verification shows left femor osteosynthetic material fracture, after which a surgery is performed on 06.06.2024 (Op: Extractio alentthesis femoris l. sin. Osteosynthesis cum IM nail). Following physical therapy, 90 degrees flexation is achieved in the left hip. Knee and ankle joint movements are re within normal physiological ranges. Densitometry measurements on 21.08.2024, show: T-score (vert): -2.0 T-score (fem): -1.7

## Conclusion

After rehabilitation, the patient regained the ability to walk independently, with acceptable motion range and functional movement in the hip.

**Keywords:** fracture, osteoporosis, bisphosphonates