**Abstract**

Case 1: A 35-year old woman in the 8th month of her first pregnancy suffered acute lumbar pain that persisted for 4 months. In the 5th month postpartum an acute increase in the low back pain led to a MRI which showed recent deformity in L1 and deformities of undetermined time of evolution in L2, L4, and L5. Laboratory evaluation did not reveal metabolic derangements. She had low bone mineral density (BMD, DXA) and severe deterioration of the microarchitecture of distal appendicular bone (HR-pQCT). Kyphoplasty of all 4 vertebrae was performed in 2 stages, and treatment with subcutaneous denosumab, 60 mg every 6 months, was begun. There was rapid and almost complete improvement in pain. An increase in trabecular bone was documented with HR-pQCT.

Case 2: A 33-year old mother who was breastfeeding her first-born child experimented acute dorsal pain. MRI revealed partial compression fractures in vertebrae D5-7. Her axial BMD was low. There was no family history of osteoporosis, and causes of secondary osteoporosis were ruled out. Her pain slowly subsided with conservative measures, oral analgesics, and nasal calcitonin. Then, treatment with oral strontium ranelate was prescribed; after 3 months serum alkaline phosphatase and osteocalcin had not increased, and after one year lumbar bone mineral density (BMD) was unchanged. Treatment was switched to subcutaneous denosumab. After one year, lumbar BMD had increased 14%, and the pain had almost completely subsided.

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EFFECT OF DENOSUMAB ON BONE MINERAL DENSITY AND MARKERS OF BONE TURNOVER AMONG POSTMENOPAUSAL WOMEN WITH OSTEOPOROSIS


The aim of this study was to evaluate the effect of denosumab (Dmb) on bone mineral density (BMD) and bone turnover markers after 1 year of treatment. Additionally, the effect of Dmb in bisphosphonate-naïve patients (BP-naïve) compared to patients previously treated with bisphosphonates (BP-prior) was analyzed. This retrospective study included 425 postmenopausal women treated with Dmb for 1 year in clinical practice conditions in specialized centers from Argentina. Participants were divided according to previous bisphosphonate treatment in BP-naïve and BP-prior. A control group of patients treated with BP not switched to Dmb matched by sex, age and body mass index was used. Data are expressed as mean±SEM. After 1 year of treatment with Dmb the bone formation markers total alkaline phosphatase and osteocalcin were significantly decreased (23.36% and 43.97%, respectively), as was the bone resorption marker s-CTX (69.61%). Significant increases in BMD were observed at the lumbar spine, femoral neck and total hip without differences between BP-naïve and BP-prior. A better BMD response was found in BP-prior group compared with BP treated patients not switched to Dmb. Conclusion: Dmb treatment increased BMD and decreased bone turnover markers in the whole group, with similar response in BP-naïve and BP-prior patients. A better BMD response in BP-prior patients versus BP treated patients not switched to Dmb was observed.

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