

TERIPARATIDE TREATMENT AFTER OSTEOPOROTIC PUBIC BONE FRACTURE: RADIOLOGICAL AND CLINICAL OUTCOMES

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Aim: Teriparatide (TPD) has been shown to reduce the incidence of fractures in osteoporotic patients and also to have a positive impact in fracture-healing. Pubic bone osteoporotic fractures often lead to increased morbidity, mortality and loss of mobility. The purpose of this study was to study the effects of TPD treatment in patients with osteoporotic pubic bone fractures.

Material-Method: Twelve patients (8 female and 4 male) with mean age of 79.3 years have been admitted in our clinic between 2015 and 2017 following an acute osteoporotic pubic bone fracture. The fracture was diagnosed and evaluated with plain X-rays and computed tomography (CT). During their hospitalization, bone mineral density (BMD) was measured with a Dual Emission X-ray Absorptiometry (DEXA) scan. All patients received a once-daily dose of 20mg TPD together with 1000mg calcium and 800 IU cholecalciferol. The follow up was done at 1, 2, 3, 6 and 12 months after the fracture. Radiological outcome was assessed with plain X-rays and functional outcomes with Visual Analogue Scale (VAS). Bone Turnover Markers -BTM (CTX and P1NP) were measured during their hospitalization and 2 months after the fracture and a new DEXA scan was performed at 12 months after the fracture.

Results: Radiological healing of all fractures was achieved by the third month after the fracture (mean time 2 months). VAS scores improved significantly at 1 month after the fracture (from 85.3 to 36.4, $p < 0.03$). BTMs mean values showed a significant increase 1 month after the fracture, CTX from 0.42 to 0.67 ng/ml and P1NP from 48 to 91.3 ng/ml, both being statistically significant (< 0.02). BMD at 12 months showed a small increase but was not statistically significant. During the follow up no complications occurred related to the treatment.

Conclusions: Treatment with TPD after a pubic bone fracture results in significant pain reduction, faster mobilization of the patient and increased fracture healing rate. Although the BMD has no significant increase, the proven effect of TPD on fracture prevention and on the clinical outcome makes its use an option to optimize the management of pubic bone osteoporotic fractures.