

Bone Fracture in Breast Cancer Patients with Isolated Bone Metastasis*

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Abstract

Aim: To analyse the incidence of bone fracture of breast cancer patients with isolated bone metastasis and its effect on survival. We tried to find an answer to the question of "Can the development of bone fracture be predicted?"

Methods: Between 1993-2006, 139 breast cancer patients with isolated bone metastasis were examined. Patients were divided into two groups depending on the development of pathologic bone fracture.

Results: Fractures were developed in 41 patients (29.5%) within 41 months of follow-up. The locations of pathologic bone fracture were vertebral fracture in 26 patients (63.4%), femur fracture in 11 patients (26.8%), and hip fracture in four patients (9.8%). Fracture rates in hormone sensitive and resistant patients were 31.2% and 14.3%, respectively. The fracture rates in 13 triple negative and non triple negative patients were 7.7% and 31.4%, respectively ($p=0.07$). High CA 15-3 levels at the time of metastasis in patients with and without fractures were 68.4% and 61.1%, respectively. The risk for fracture was also high in Her2-neu positive patients (38.7% vs. 26.5%). While the incidence of fracture with the presence of one factor mentioned above was 22.2%, it was increased to 36.1% in the presence of two or three factors ($p=0.13$). Median survivals of the patients with and without fractures were 48 and 39 months, respectively ($p=0.65$).

Conclusion: Hormone sensitivity, high CA 15-3 levels and positive Her2-neu status are slight risk factors for bone fractures. Survival was not different in patients with or without bone fractures.

Key words: breast carcinoma, bone fracture, bone metastases, skeletal related events, survival

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