

Summary

Chronological Study for Solitary Bone Metastasis in the Sternum from Breast Cancer with Bone Scintigraphy

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Since breast cancer is frequently associated with bone metastasis, bone scintigraphies have been performed to determine pre-operative staging and to survey postoperative bone metastasis. The sternum, in particular, is a site at which is difficult to differentiate between benign bone disease and bone metastasis, because of varied uptake and wide individual variations. In this study, chronological bone images were scintigraphied in six cases with solitary sternal metastasis and three cases with benign bone disease including two fracture cases and one arthritis case. On bone scintigrams in which solitary sternal metastasis appeared, increased uptake was found in five cases, and photon deficiency was observed in one case. During follow-up scintigraphies, abnormal accumula-

tions, such as hot spots and cold lesions, increased in the bone metastasis while abnormal uptake disappeared or was unchanged in the benign bone disease cases. On CT, four cases showed osteolytic change, and one exhibited osteosclerotic change. These findings indicate that sternal metastasis usually shows osteolytic change, even if a hot lesion is recognized on bone scintigraphy.

In solitary sternal metastasis, for which early diagnosis is difficult, both an integrated diagnosis using other imaging techniques and chronological bone scintigraphy are important.

Key words: Bone scintigraphy, Bone metastasis, Sternum, Breast cancer.