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CLINICAL STUDY ON BONE METASTASES FROM LUNG CANCER BY BONE SCINTIGRAPHY. R.Matsui, K. Ushio, S.Nishiyama, I.Narabayashi, K.Itoh, R. Ohnishi, K.Sugimura, T.Suematsu, K.Nabeshima, C.Takemura, K.Yamazaki, N.Ishido, Y.Inoue, T. Fukukawa and S.Kimura. Hyogo Cancer Center Hospital and Kobe University School of Medicine. Kobe.

^{99m}Tc-disphosphate bone scintigrams in 150 cases of lung cancer were reviewed. An average incidence of 31.3%(47/150) of bone metastases was found at the initial bone scintigrams. Bone metastases was more frequent with adenocarcinoma(45.9% 17/37) and less frequent in squamous cell carcinoma(19.3% 12/62) and there was a relatively low incidence of bone metastases in small cell carcinoma(25.8% 8/31) and large cell carcinoma(30% 3/10). Solitary metastases rate was high in squamous cell carcinoma(5/12) and small cell carcinoma(4/8). The bone metastases according to staging(1978, TNM) revealed the following percentages: stage I, 20%(2/10), stage II, 25%(6/24), stage III 26.4%(18/68) and stage IV, 41.7%(20/48). The distribution of bone metastases were seen in ribs(63.8%), lumbar spine(36.1%), thoracic spine(34.0%) and in extremity bone little bone metastases were seen.

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BONE METASTASES FROM GASTRIC CANCER. — CLINICAL EVALUATION ON BONE SCINTIGRAM — M.Seto, N.Tonami, K.Koizumi and K.Hisada. Kanazawa University, School of Medicine. Kanazawa.

We have studied bone scintigrams in 60 patients with gastric cancer. Of these 60 patients, bone metastases were found in 15 patients (25%). There were no evidence of bone metastases in polypoid lesions, cancers of the antrum, carcinomas in situ, advanced cancers without invasion to serosa, cancer with N₀ or N₁ regional lymph node metastases, highly differentiated adenocarcinomas and papillary adenocarcinomas. On the contrary, high rates of bone metastases were seen in cancers of the corpus, advanced cancers with invasion to neighboring structures and tubular adenocarcinomas.

Of these 15 patients with bone metastasis, 3 patients showed very similar clinical features and the findings of "diffuse bone metastases on bone scintigrams".

Cancer of the antrum showed high rates of liver metastases, while cancers of the corpus showed high rates of bone metastases.

Sixty percent of the patients with bone metastases did not have liver metastases and there seemed to be no significant relationship between liver metastases and bone metastases. From these results we suppose that non-portal tract through the vertebral venous plexus instead of portal tract may be the other route of bone metastases from gastric cancer.

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CLINICAL STUDY ON BONE METASTASIS FROM BREAST CANCER BY BONE SCINTIGRAPHY. Y. Kuwashima, K.Machida, J.Nishikawa, T.Ohtake, N.Watanabe and M.Iio. University of Tokyo. Tokyo.

Tc-99m-MDP bone scintigrams in 43 cases of post-operative breast cancer with positive bone scan were reviewed. Whole body scan was performed about two hours after intravenous administration of Tc-99m-MDP and spot film was obtained in doubtful cases. The confirmation of bone metastasis was based on clinical data. Clinical stages of the patients were following; stage 1, 2 patients; stage 2, 17 patients; stage 3a, 18 patients; stage 3b, 4 patients; stage 4, 2 patients. Common metastatic sites were rib, lumbar spine, skull, thoracic spine, iliac bone and S-I joint. In two cases bone metastases were detected more than five years after curative surgery. In conclusion, it is necessary to follow the patients for a long time even in the case of early stage to find bone metastasis.

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COURSE STUDY ON BONE METASTASIS OF BREAST CANCER FROM THE VIEW POINT OF BONE SCINTIGRAPHY. T.Ishimaru, H.Maeda, S.Okahashi, T.Sakata, K.Yamasaki and H.Akagi. Osaka Medical College. Osaka.

42 cases of breast cancer clinically diagnosed as bone metastasis were evaluated by means of bone scintigraphy, of which were practiced twice or more in our institute.

In this study, breast cancer showed the tendency of metastating to the bones of the bodystem, although no difference observed among the bones the metastatic lesions were first found and the last.

The course of bone metastasis were classified into two types by the increasing curve of metastatic bone lesions, sudden increasing type and that of increasing gradually. And metastasis to Os sternum is estimated to be the important turning point.

Post operative irradiation given to the primary lesion showed dullness in its increasing curve of metastatic bone lesions compared to the non irradiated. However, local irradiation given to the bone with metastasis were found to have little influence on this curve.