2504

ANALYSIS OF BONE SCAN IN BREAST CANCER-SIGNIFICANCE OF FOLLOW-UP STUDY.

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It is well known that metastatic involvement of the bone is common in the breast cancer. Therefore the bone scan has been frequently used as a screening procedure of this involvement for the breast cancer patients. In this study we have reviewed two hundred and six bone scans obtained of 148 cases for these two years. Seventy three scans of 68 cases showed no abnormality to suggest bony involvement, thus leaving 133 scans of 80 cases had positive or equivocal findings. In these 80 cases, 20 cases was diagnosed as bone metastasis. Seven cases of these 20 cases initial diagnosis of bone involvement is done by the bone scan. 1) young age 2) a few years after initial treatment 3) advanced stage 4) extra osseaus recurrence should be thought as a high risk group of osseous metastasis. Patients whose bone scans are positive with normal radiographs should be also thought as a high risk group and obtained periodic bone scan, because in these patients bone scan may detect occult osseous involvement.

2505

CLINICAL SIGNIFICANCE OF BONE SCAN IN RADIATION TREATMENT OF UTERINE CERVICAL CANCER.

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Clinical significance of bone scan in the radiotherapy of uterine cervical cncer has been discussed. Bone scan was ordored for the patients of uterine cervical cancer, who were new patients with squamous cell carcinoma and diagnosed as 3rd or 4th stage. Also bone scan was ordored for the patients who complained pain, that was suspected due to bone metastasis, during follow up study. The patients, who were diagnosed as bone metastasis by bone scan but diagnosed no evidence of metastasis by another methods, were followed and ordored repeated bone scan within 3 or 4 months. Eighty four scans were ordored for 66 patients. Thirty eight cases(58%) were diagnosed as bone metastasis by bone scan but only 7 cases(11%) had evidences of metastatic bone lesion by other methods. False positive were seen on lower lumbal bones and sacro-iliac joints especially. In 13 cases, who were ordored more than 2 scan, only 2 cases(15%) showed progressive changes and other 11 cases showed improoved or unchanged bone scan. Twenty patients of 66 cases showed renal abnormalities in the bone scan, and followed by other methods of examination. Bone scan is one of the usefull methods of examination for metastatic bone lesion, but has many false positives in this study. It would be need to pay an attention for false positive of bone scan in patients of uterine cervical cancer.

2506

A COMPARATIVE STUDY ON THE UTILITY OF ^{99m}Tc-MDP AND ^{67}Ga-CITRATE IN BONE TUMOR.

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We investigated the distribution of ^{67}Ga-citrate concentration on an experimental tumor and compared the result with the distribution of ^{99m}Tc-MDP concentration. We further conducted a comparative study of the two agents in a number of clinical cases. In experimental bone tumor (VX_2 carcinoma) ^{99m}Tc-MDP concentrated only at new bone formation sites reactive to the tumor, while ^{67}Ga-citrate did at tumor sites as well. This fact implies that ^{67}Ga-citrate is more useful for bone tumor investigations. In the osteosarcoma case the ^{67}Ga-scintigram showed almost the same degree of accumulation as the ^{99m}Tc-MDP scintigram. The concentration area was, however, smaller in ^{99m}Tc-MDP. Furthermore, ^{67}Ga-citrate concentrated far less in the bone giant cell tumor and malignant fibrous histiocytoma than did ^{99m}Tc-MDP, indicating that ^{67}Ga-citrate was not adequate. The primary purpose of scintigram is to discover the metastasis of malignant tumor at such a stage that the simple X-ray image cannot identify. ^{99m}Tc-MDP is supposed to serve this purpose better than ^{67}Ga-citrate insomuch as ^{99m}Tc-MDP sensitive concentration at the reactive change site even though the focus is small, while ^{67}Ga-citrate is inferior in such sensitivity.

2507

RADIONUCLIDE SCINTIGRAPHIC FINDINGS OF STRESS-FRACTURE.

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Bone radiographs and RI-scintigrams of sports players suspected stress fractures were compared. Interval between onset of pain and examination ranged one week to two years. (Most frequently about one month.) Associated activities include of running 7 cases, tennis, volleyball, basketball, etc., 10 cases and rugger 3 cases. Site of injury included tibia 14 cases, fibula 4 cases and calcaneus 3 cases. All rugger players had calcaneus fracture. Radiographic finding were negative or equivocal in 9 cases. Bone scintigraphy was positive in all cases. Bone scintigraphy is useful in diagnosis of stress fracture especially in early phase.