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EVALUATION OF IN-111-OXINE LABELED LEUKOCYTES IMAGES IN BONE AND JOINT DISEASES. K. Uno, S. Uematsu, J. Itami, S. Nawano, K. Imazeki, T. Miyoshi, N. Arimizu, F. Endo, J. Nagase, S. Kamata, G. Uchiyama and Y. Kitakata. Chiba University School of Medicine. Kimitsu Central Hospital. Chiba. Yamanashi University School of Medicine. Yamanashi.

In-111-leukocytes scans used for detecting inflammatory lesions of bone and joint diseases were compared with Tc-99m MDP bone scans in 30 cases. Sixteen cases showed abnormal radionuclide accumulation to the lesions in both scans, and 13 cases showed no accumulation in-111-leukocytes scans. One of 3 Brodie's abscesses was negative in both scans. Six cases whose scans showed intensive accumulation in the lesions were 3 recurrent chronic osteomyelitis, 1 pyogenic arthritis and 2 rheumatoid arthritis. Mild accumulation of In-111-leukocytes was observed in post-treatment states of chronic osteomyelitis, arthritis, juvenile rheumatoid arthritis, as well as metastatic bone tumor and malignant fibrous histiocytoma. No accumulation of In-111-leukocytes was observed in tuberculous spondylitis and tuberculosis of the hip joint. In-111-leukocytes scan was clinically more useful than Tc-99m MDP bone scan in evaluating the acute inflammatory processes of bone and joint diseases.

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EVALUATION OF DYNAMIC SCINTIGRAPHY WITH Tc-99m MDP FOR BONE AND SOFT TISSUE DISEASE. Y. Bussaka, T. Okinaga, S. Morita, K. Yano, H. Ohtake, T. Yamashita, K. Noguchi, Y. Fukudome, N. Umezaki, S. Kukuchi. Kurume University School of Medicine, Kurume, Yanagawa Public Hospital. Yanagawa.

We studied whether a dynamic scintigraphy with Tc-99m MDP was effective to differential diagnosis of malignant and benign tumor of bone and soft tissue disease. Tc-99m MDP was injected into vein with the bolus method. From direct after injection to 5 minutes, sequential images of 100 frames every 3 seconds were collected and static images after 10 minutes, 20 minutes and 3 hours were also prepared. And a time active curve was delineated from ROI designed on the focal lesion. 16 cases of prepared cases were as follow, osteocyst 4 cases, fracture 1 case, osteomyelitis 2 cases, liposarcoma 2 cases, lipoma 1 case, rhabdomyosarcoma 1 case, angiosarcoma 1 case, capillary hemoangioma 1 case, and metastatic bone tumor 1 case. Dynamic scintigraphy showed a vascular situation in the site of the focal lesion in bone and soft tissue disease and time activity curve was effective to quantitative study of these diseases.

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THERAPEUTIC COURSE AND BONE SCINTIGRAPHY IN GOUT. S. Omori, F. Hattori, S. Hayashi and H. Miyajima. Kanagawa Prefectural Atsugi Hospital and Jikei University School of Medicine. Tokyo.

We performed bone scintigraphy in patients with gout and compared the findings with clinical and x-ray findings. The purpose of this paper is to present the results. Subjects and Method: From gouty patients under treatment at the department 23 in whom both bone scintigraphy and x-ray examination were performed were chosen for the study. Scintigrams of bones were made 3 hours after the intravenous injection of 15 mCi Tc-MDP at regular 6-month intervals. Results: 87.5% of bone scintigrams made at the time of an attack were positive. Well controlled cases with symptomatic remission provided negative scintigraphic findings of bone even if x-ray findings were remarkable. On the other hand, those cases where there were unequivocal inflammatory symptoms of the joints involved exhibited areas of excessive radioisotope accumulation in the affected locality even when x-ray findings were not remarkable. These results led us to conclude that bone scintigraphy, when used in the follow-up observation of the therapeutic course of gout, proves to be useful as a means of making localizing diagnosis of involved joints and of evaluating disease activity at the affected locality.

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BONE SCINTIGRAM OF STRESS FRACTURE (SECOND REPORT). A. Furuta, K. Tanohata, T. Hashizume, and H. Nakazima. (Kanto Rosai Hospital. Kawasaki.) Y. Kobayashi and K. Odagiri. (Yokohama City University School of Medicine. Yokohama.)

Bone scintigram using Tc-99m MDP was taken in 58 patients (38 males, 20 females) of stress fracture. The patient's age is from 9 to 44 years. The site of lesions is 27 in tibia, 10 in fibula, 11 in tarsal bones, 5 in bones of digits of foot and 5 in other bones. In respect of laterality, 39 are noted in the right side and 19 in the left side. When patients complaint pain of lesions, bone scintigram shows positive findings, but roentgenographic study indicates no abnormal findings. The positive findings of roentgenographic study is noted 2 or 3 weeks after complaints. Bone scintigram is very useful in detection of stress fracture of tarsal bones and digital bones, because these lesions show a little changes in roentgen examination.