

BONE SCINTIGRAPHY IN CHRONIC SKIN DISEASES

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Bone scan was performed in 80 patients with chronic skin disease. Pathological bone uptake such as a single hot spot or multiple hot spots was seen in many cases. Three hours after administration of Tc-99m-MDP, anterior and posterior whole body images were obtained. Thereafter the hands, feet and the regions abnormal on the whole body scan were examined as spot images with a scinticamera. Patients with malignancy or fracture were excluded from this study. In addition to atopic dermatitis, pruritis, chronic urticaria, erythroderma, pustula, eczema nummulare, Sweet's syndrome, and herpes zoster, the psoriasis was studied with most remarkable results.

Twenty-three of 41 patients with chronic psoriasis demonstrated abnormal uptake in the hands, ribs or vertebrae. Eleven of the 23 cases demonstrated a hot spot in at least one joint or joint group of hands. Eight of 23 in vertebrae and 7 of 23 in the ribs. In most cases, the abnormal hot spot appeared as multiple accumulation in hands and feet, and single in ribs and vertebrae.

Serial bone scan studied of 2 cases of pustulous psoriasis showed that when the patients complained joint pain abnormal uptake was not remarkable, and later when complaints disappeared marked uptakes moved with time from carpals through metacarpals down to interphalangeal regions.

The X-ray of the hands shows the arthritic changes only on distal I-P joints. In patients with abnormal uptake in the vertebrae and ribs, there was no demonstrable abnormal bone change on the plain X-ray film. Biopsy of the ribs with abnormal uptake on bone scan was done in two patients. Histologically there were osteoid tissues and fibrotic changes. There were no relation between bone scan abnormality and duration of the disease or usage of steroid.

CLINICAL USE OF BONE SCINTEGRAPHY AND CT SCAN (HEAD UNIT) IN VARIOUS METABOLIC BONE DISEASE

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Radionuclide bone scintigraphy is recently applied to metabolic bone diseases such as hyperparathyroidism with certain consensus. In this conference held last year, we reported the comparative study of radionuclide bone scan and CT scan in the patients with chronic renal failure on maintenance dialysis. In the patients with the secondary hyperparathyroidism, bone scintigram shows abnormal high activity in the calvarium, on the other hand EMI value in such calvarium showed significantly low value compared to that of the control group.

Based on these results, this time we studied Paget's disease involving the skull 2, acromegaly 2, primary hyperparathyroidism 2, hyperthyroidism 10, and 17 patients on the chronic renal dialysis.

Although no significant abnormality was noted in the hyperthyroidism except for one patient, Paget's disease, acromegaly and hyperparathyroidism demonstrated abnormally high accumulation on the skull in bone scan and meaningful low value in the bone CT of the skull.

Most interested is the follow-up study before and after surgery of the patient of the primary hyperparathyroidism due to parathyroid adenoma. Follow-up scintigrams showed marked uptake in the calvarium, mandible, vertebrae and ribs, but not determined is the extent of the demineralization, which is digitally expressed by CT scan from 210 to 285 in EMI value.

We believe that the combined study of the radionuclide bone scan and CT scan is the best method to detect the early change and to measure the extent of the demineralization of the bone in the metabolic bone disease.