EVALUATION OF ROD (RENAL OSTEODYSTROPHY) BY BONE SCINTIGRAPHY: COMPARISON OF BONE MINERAL CONTENT MEASURED WITH CT SCAN WITH PHANTOM FOR SPINE AND RI UPTAKE RATIO.

Kawasaki Medical School, Kurashiki.

Bone scintigraphy was performed in 60 patients with chronic renal failure on artificial dialysis. In addition, accumulation part of RI in bone was classified and RI uptake ratio of bone to soft tissue was calculated. Furthermore, in order to measure non-invasively the bone mineral content (BMC) in L3, CT scanning combined with phantom for spine was done, and BMC obtained from relation of various concentration of K2HPO4 of standard in phantom and CT number was compared with RI uptake ratio.

Bone scintigram was classified as follows; relatively decreased uptake in bone (low turn-over bone type), increased uptake in costochondral junction (osteomalacic type), mixed type and hyperparathyroid type showed low in value of both RI uptake ratio and BMC. On the other hand, hyperparathyroid type showed high. Imaging of trabecular bone in L3 in hyperparathyroid was shown to be mixed with bone formation and resorption on CT scan.

In conclusion, it was suspected that calculation of RI uptake ratio of L3 to soft tissue on bone scintigram was reflected the state of bone metabolism in ROD.

INTERPRETATION OF BONE SCANS IN THE CANCER PATIENTS OVER 80 YEARS OLD.

Yokohama City University, Yokohama.

173 bone scans in 137 cancer patients over 80 years old were reviewed. There were 33 cases of prostate cancers, 28 of lung cancers, 22 of uterine cervix cancers, 16 of head and neck tumors, 12 of breast cancers, 14 of GI tract malignancies and 11 of other primary sites malignancies. All of patients, whole body bone scintigrams and several spot views were taken by camera 4-6 hours after injection of Tc-99m-MDP. Interpretation of scan abnormalities were made in conjunction with past history, clinical sign, radiographical (including X-CT) examinations, and subsequent clinical course. Incidence of osseous metastasis was found in 15% which was no higher incidence than the other cancer patients. Non-metastatic osseous lesions were detected in 77 cases. There were fractures of the rib (27 cases, 20%), spondylosis (29 cases, 21%), vertebral compression fractures (11 cases, 8%), arthropathy of the knee (19 cases, 13%), fracture of the femoral neck and so forth. Incidences of these benign lesion were higher than the other younger cancer patients. We concluded that careful interpretation of scan abnormalities in aged patients was necessary.