Soft-tissue uptake of ^{99m}Tc-MDP in amyloidosis associated with multiple myeloma — A consideration to similar findings in extraosseous soft-tissue—

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A case demonstrated soft-tissue uptake of ^{99m}Tc-MDP was reported. A 53-year-old women was admitted for leg pain, back pain and anemia. Physical examination on admission revealed several small purples on both eyelids and thickness of the tongue. Soft-tissue fullness was noted over the lower abdominal wall and hips. Examination of the urine was positive for Bence Jones protein. A bone marrow biopsy was consist with plasma cell myeloma.

Serum protein electrophoresis revealed a Bence Jones protein with lambda chains. The ratio of kappa to lambda was 0.72 (normal: 1.16 - 1.39).

Congo red staining of cutaneous biopsy sections have shown amyloid deposits in subcutaneous tissue and in muscle. A bone scan using 10mCi of ^{99m}Tc-labeled MDP revealed diffuse, excessive soft-tissue uptake especially on hips and thighs.

Uptake of bone seeking agents in uncalcified, extraosseous soft-tissue has been found in various diseases such as brain metastasis, cerebral infarction, breast carcinoma, myocardial infarction, pericarditis, and so forth. And in amyloidosis uptake of ^{99m}Tc-MDP about heart, liver, shoulders, hips and thighs has been reported. Scintigraphic findings of our patient was shown similar to renal failure and systemic bone diseases. It is a fact that uptake of ^{99m}Tc-MDP in soft-tissue revealed to amyloid deposits, but it seems to be difficult to distinguish amyloidosis from the other disorders.

Pharmacuetical problem (colloid formation and free thechnetium) was also discussed.

BONE SCINTIGRAPHIC STUDY ON OSEOMYELITIS

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Osteomyelitis is a representative infections disease in the field of orthopedic surgery and is a serious condition with a prominent tendency to recurrence.

In the present study bone scintigrams were taken pre-and postoperatively from osteomyelitis patients in an attempt to evaluate the course of disease. The cases will be presented here together with prognosis thus evaluated.

Material and method:The subjects used in this study were 33 osteomyelitis patients who were being kept under observation while receiving intermittent antibiotic therapy, which was initiated for the prophylaxis of recurrence after operative therapy combined with intense antibiotic therapy had brought about subsidence of clinical symptoms. The duration of follow-up in this series ranged from 6 months to 5 years; bone scan, as a rule, were made preoperatively and 1 month, 6months, 1 years, 2 and 3 years after operation respectively.

Results:Bone scintigrams revealed extensive areas of RI accumulation in early stages of the disease even when there were almost no noticeable changes seen by x-ray.Moreover, the degree of these changes in scintigram was found to be well correlated with the sedimentation rate and clinical findings. In those cases where there was a pronounced RI accumulation noted no bone scintigraphy preoperatively, localization of lesions and a reduction in RI accumulation were evident postoperatively. Marked improvement was also noted in laboratory examination results. Thus there was a good concordance between scintigraphic and clinical findings.

The degree of RI accumulation is therefore considered to give a proper estimate of disease activity and therapeutic response. Bone scintigraphy can thus be concluded to provide a reliable means of salient usefulness in the diagnosis of osteomyelitis.