Bone Scintiscann with ^{85}Sr

Y. Ono, O. Ito, K. Asakura and M. Sugahara

Department of Radiology

K. Suzuki

Department of Orthopedic Surgery, School of Medicine, Yokohama University, Yokohama

It has been known that strontium shows a similar metabolism as calcium.

From the observation that ^{85}Sr as well as ^{47}Ca accumulate in and around the area of bone tumor, osteomyelitis and fracture, there are various investigation based on its utilization.

In this paper, ^{85}Sr uptake in secondary degenerative coxarthrosis was studied by means of scintiscanning with special reference to investigation of correlationship between radiographic findings and scintigram.

Methods: ^{85}Sr (20 —100μCi) was injected intravenously in 13 patients of secondary degenerative coxarthrosis. On 7 and 14 days following injection, photoscitigram and coloscitigram were recorded. At the same time, rentogenogram was also taken from the focus of 2 meter high to skin surface. By superimposing of scanning data and radiograph, the localization of ^{85}Sr uptake in hip joints was studied.

Results: Correlationship between coxalgia and abnormal uptake of ^{85}Sr showed higher and both parameter were in accordance with 20 in 26 hips.

Correlationship between radiographic findings and abnormal ^{85}Sr uptake showed also closer and both parameter were in accordance with 22 in 26 hips.

However, correlationship between sclerosis on radiograph and ^{85}Sr uptake did not always show closer unity by analysing finding in superior, middle and inferior regions in acetamula and femoral heads.

Comments and summary: Area scanning with aid of ^{85}Sr in secondary degenerative coxarthrosis was studied and it was observed that data on scanning had closer correlationship between covalgia and abnormal radiographic findings, however had not always between sclerosis on radiograph. These observation suggests us useful information can be provided by this method for the evaluation of clinical course in secondary degenerative coxathrosis and this method can be available for essessment of prognosis and operative method and timing, and evaluation of operative effect in the future.

Scanning of the Osteomyelitis

S. Omori, Y. Itami and H. Miyawaki

Department of Orthopaedic Surgery, The Jikei University, School of Medicine, Tokyo

A comparative study of ^{85}Sr scanning and the clinical findings was done on 70 osteomyelitis patients.

Fifty four of these patients were hematogeous chronic osteomyelitis and others were chronic osteomyelitis due to fracture. Patients were recieved 1μCi/kg body weight of ^{85}Sr intravenously and scanned 24-48 hours after injection. Profile scanning was carried out at a screening procedure for localized bone disease. If there is asymmetry of ^{85}Sr concentration, the paticular areas were scanned with a standard scanner.

According to the findings of X-ray films