

activity of the infection and the uptake of  $^{85}\text{Sr}$ . It can be concluded that  $^{85}\text{Sr}$  external counting is a useful method in the evaluation

of the activity and prognosis of tuberculous spondylitis.

## A Experience of Bone Scan with $^{85}\text{Sr}$

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We reported a experience of bone scan with  $^{85}\text{Sr}$ .

Bone scan was performed in 33 patients with 47 bone lesions, which consisted of 13 patients with 24 lesions of bone metastases, 9 patients with 11 lesions of bone metastases suspected, 9 patients of primary bone tumor and 2 patients of systematic bone disease.

In our study of 47 bone lesions, both X-ray and the scan in 23 lesions were positive for tumor metastases.

In 5 lesions the scan was positive and the roentgenogm was negative. We presented three representative cases to show the effectiveness of this method.

The first case was a 42 year old female with reticulum cell sarcoma, who had progressive and severe pain in the lumbal region.

The roentgenogram was normal. A strontium-85 scan of the same area, revealed an abnormal and marked isotope accumulation in the area of pain in the left ilium and sacroiliac joint.

In this case, bone scan was effective in the early diagnosis of bone metastasis.

The second case was a 56 year old male with high back pain and a history of gastroectomy for cancer of the stomach. Roentgenogram of the 7th cervical vertebral body demonstrated

slightly osteolytic change.

The scan revealed marked deposition of  $^{85}\text{Sr}$  in the same area. And in this scan, metastases of the scapular region which was missed in the roentgenogram was also detected.

Bone scan could easily detect the bone metastases which were apt to pass by a oversight in roentgenogram.

As the last case we showed 59 year old male with cancer of the right maxilla. The orbital wall involved. It was difficult to demonstrate the bone invasion by routine X-ray technique.

Bone scan revealed marked isotope accumulation in the area.

Bone scan was useful in such a case that interpretation of the roentgenogram was difficult.

41 bone lesions with abnormality in roentgenogram were divided into 4 groups according to roentgenographic characteristics.

Bone lesions with osteoplastic change was all positive in bone scans and 6 of 13 osteolytic changes were positive. Almost all of bone abnormalities with pure osteolytic change in X-ray and negative scan were primary bone tumor with cyst. Because bone metastases usually consist of the both osteolytic and osteoplastic changes, bone scans effective for early diagnosis of bone metastasis.