Study of 700 Cases with Bone Scintigraphy

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Whole body scintigraphy with ^{99m}Tc diphosphonate were taken in 629 patients (798 procedures). Among them 92 cases with lung cancer, 57 cases with breast cancer and 33 cases with prostatic cancer were reviewed in comparison with bone X-P examination. Fifty one of 92 cases with lung cancer (51%) were diagnosed to have bone metastatis. Fourty seven cases (92%) of them were detected by bone scintigraphy, while 22 cases (43%) by bone X-P examination. Ribs were the commonest site of involvement from the lung cancer in high incidence of 65%. Twenty four of 57 cases with breast cancer (42%) were diagnosed to have bone metastasis. All cases (100%) were detected by bone scintigraphy, while 14 cases (58%) by bone X-P examination. Ribs, spines were common sites of involvement from the breast in high incidence of 42–67%. Twenty two of 33 cases with prostatic cancer were diagnosed to have bone metastasis. Twenty one of them (95%) were deteced by bone scintigraphy in spite of 15 cases (68%) by bone X-P examination. Pelvis, spines, Ribs were common sites of involvement. We have experienced four cases with diffuse bone metastases which showed abnormally beautiful bone image, decreased activity of the both kidneys and soft tissues on bone scintigraphy. Three cases of hypertrophic pulmonary osteoarthropathy in patients with lung cancer showed typical pericortial deposition of activity on bone scintigraphy. This finding should not be mistaken to be bone metastases.

Significance of Whole Body Bone Scintigram in the Determination of Clinical Stages on Cases with Adenocarcinoma of the Lung

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One hundred and six patients having adenocarcinoma of the lung were studied by whole body bone scanning with ^{99m}Tc-phosphates. Clinical stage classification revealed 44 in Stage I, 9 in Stage II, and 53 in Stage III. The cases of positive scan were 23, 5 and 36 respectively. Sixty four cases were treated surfically. In 38 out of these 64, bone scanning was performed within 3 months after the establishment of their clinical stages. Clinical stage classification for these 38 cases revealed 22 in Stage I (with 7 positives), 4 in Stage II (with 1 positive), and 12 in Stage III (with 5 positives).

Pathological stage classification was made for these 22 cases of clinical stage I. Subsequently, it was found that only 6 stayed in Stage I and 4 of the remaining 16 were found as stage II and all the others as Stage III. None of these 6 cases in Pathological Stage I had positive scan, but 1 out of 4 in Stage II and 6 out of 12 in Stage III were found to have bone metastases on the whole body scintigrams.

Needle biopsy was performed in 5 cases showing hot spots in ribs on the scintigrams. All of them were proved to have a metastasis pathologically.

As a conclusion, we must stress that the results of whole body bone scanning should be taken into consideration when clinical stage slassification is made on cases with adenocarcinoma of the lung. Needle biopsy to the rib lesions is also whorthwhile to confirm the metastasis.