Two Patients with Osteogenic Tumor with Negative Image of Part of the Tumor Using ^{99m}Tc-Pyrophosphate and ^{67}Ga-Eitrate Scientigram

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A combined scan with ^{99m}Tc-pyrophosphate and ^{67}Ga-citrate is used in the diagnosis of diseases in the oral cavity.

In the present study, the findings in the 2 scintigrams and the operative findings were compared in two patients with osteogenic tumor with a negative image of part of the tumor.

Case I. K.K., 17 year old male with osteogenic sarcoma

The tumor filled the left maxillary sinus and 1/3 of the tumor originating from the maxillary molars region was exposed to the oral cavity. In both scintigrams, the upper 1/2 gave a positive image, whereas the lower 1/2 a negative image.

Case II. K.K. 30 year old female with chondrosarcoma

The tumor recurred after removal of the primary tumor. A hen's egg sized tumor was found on the lower edge of the right orbit. A part of the tumor was exposed to the oral cavity along the zygomatic bone.

In the two scintigrams, the tumor on the lower edge of the orbit gave a positive image, but the the tumor ranging from the lateral edge of the zygomatic bone to the oral cavity gave a negative image.

The following characteristics are shared by these two patients with a negative image of part of the tumor in the scintigram.

1. Only osteogenic tumors gave such findings.
2. A negative image appears in a part of the tumor after a rapid enlargement of the tumor mass.
3. The part of the tumor with negative image surrounds the part not directly adjacent to the bone tissue.
4. Histopathological degeneration of the part of the negative image was present but not very pronounced.
   For the production of a positive scientigram, the blood stream through this portion appears to play some role.
5. In osteo sarcoma, the formation of bone trabeculae are almost completed.

Scintigraphic Findings of Bone Disease as Obtained by Means of PHO/CON Tomographic Scintiscanner

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We have done bone scintigrams of various bone diseases by the use of a PHO/CON tomographic scintiscanner (Seale Radiographic Co.) which has been in operation at our university hospital since last year. The purpose of this paper is to present the cases with reference to the diagnostic value of this scintigraphic device in bone diseases.

The PHO/CON tomographic scintiscanner combines the outstanding features of scinticamera and scintiscanner, makes use of a miniature scinticamera as detector and is driven in a similar moden in the case of conventionally used scinticameras. With this device, a scanning time of about 40 min is required for obtainig bone scintigrams of the entire skeleton and on each exposure 12 section tomograms are provided.