

Tumor Imaging with ^{111}In Bleomycin

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Affinity of ^{111}In -bleomycin for malignant tumors of the rats and those of human beings were investigated.

The agents were injected intravenously to the rats with subcutaneous transplants of Yoshida sarcoma or ascitis hepatoma of AH 109A. They were sacrificed 1, 2, 3 or 5 days after injection. Tumor to muscle concentration ratio of Yoshida sarcoma was 5.8 and that of AH 109A was 7.1.

The whole body retention of the ^{111}In bleomycin at 24 hours after injection was about 1/3 the dose. 99 patients were investigated with ^{111}In bleomycin, including 75 cases

of primary tumors group, 14 cases of metastatic tumors group, 9 cases of screenings group and one case of false positive. The results were positive in 42.66% ($\frac{32}{75}$) in primary tumors group and 64.28% ($\frac{9}{14}$) in metastatic tumors group. 9 cases were also examined with ^{67}Ga citrate and all cases were positive.

Comparative studies were done with ^{57}Co bleomycin, $^{99\text{m}}\text{Tc}$ bleomycin, $^{111}\text{InCl}_3$ and ^{169}Yb citrate in several cases. The results appear to indicate that tumor imaging with ^{111}In bleomycin is prospective.

The Comparative Study of the Diagnostic Value of Ga-67 Citrate and Co-57 Bleomycin in Bronchial Carcinoma

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We have made an attempt to perform lung scans with Ga-67 citrate and Co-57 bleomycin in 19 cases with primary lung cancer. The images obtained from Co-57 bleomycin were compared with those obtained from Ga-67 citrate after an interval of one week.

Ga-67 scintigraphy was carried out at 48 and/ or 72 hours after the intravenous

injection of 2 m Ci of Ga-67 citrate. On the other hand Co-57 scintigraphy was recorded at 6 and/ or 24 hours after the intravenous injection of 500 μ Ci of Co-57 bleomycin. Both scintiphotos were obtained from a scintillation camera connected to a minicomputer.

Results: Co-57 bleomycin has been known to accumulate less in bone than Ga-67 citrate.