IS-1

Comparitive study of PET radiotracers in different animal tumor models.

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We compared the biodistribution of F-18 labelled alpha methyl tyrosine(FAMT)and flourodeoxyglucose(FDG) in LS-180 tumor(colorectal ca.) in nude mice and RPMI-1788 (lymphoma) in SCID mice.One hour biodistribution data in LS-180 and RPMI-1788 tumors showed higher tumor uptake of both FAMTand FDG.Tumor/blood ratio for FAMT in LS-180 tumor and RPMI-1788 was 5.45-2.63 and 2.17-0.36, respectively. Tumor/blood ratio for FDG in LS-180 and RPMI-1788 was 2.16-0.30 and 15.27-3.21, rspectively.Tumor normal organ ratio for FAMT was more than 2 in all organs except kidney in LS-180 and RPMI-1788 tumors but for FDG around 1 in almost all organs.These results show better tumor visulization with FAMT than FDG except kidney.

IS-2

Biodistribution of Tc.99 m labelled chimeric mouse-human monoclonal antibody to human leukocytes and nude mice.

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Chimeric-mouse/human monoclonal antibody against non-specific cross reacting antigen(Ch anti-NCA-95 MAb) was labelled with Tc99m and I-125 and its binding to human WBCs and LS-180 (colorectal carcinoma cells expressing CEA on their surfaces) increased in proportion to the number of cells added.In biodistribution studies,Tc99m and I-125 labelled Ch anti-NCA-95 MAb revealed higher tumor uptake and tumor -blood ratio was around 3 after 24 hours.Tumor-normal organ ratio was also more than 2 in all organs except tumor-kidney ratio.Schintigrams of athymic nude mice confirmed the results of biodistribution studies showing a higher radioactivity in tumor and kidney of the mice administred with Tc99m and I-125 labelled Ch anti-NCA 95 MAb.

IS-3

COMPARISON OF TL-201 AND TC-99M TETROFOSMIN IN DETECTING METSTATIC THYROID CANCER

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The purpose of this study is to compare Tl-201(Tl) and Tc-99m tetrofosmin (TF) in detecting metastastic foci after total thyroidectomy of thyroid cancer. Fifteen thyroidectomized patients (M:F=3:12) underwent I-131, Tl and Tc-99m TF scans within a week. Sixteen hot spots were noted on I-131 scan and were considered as metastastic foci.

Tl scan showed 9/16 lesions (56.3%) and TF scan 5/16 lesions (31.3%). Tl scan detected one pulmonary lesion not showed on both I-131 and TF scans. In conclusion, Tl and TF were inferior to I-131 in detecting metastasis of differentiated thyroid cancer, and TF was more inferior to Tl.

IS-4

Assessment of long term follow-up after I-131 treatment in Graves'disease by RIA method and some Nuclear Medicine tests.

Mai Trong Khoa, Phan Sy An,Nguyen Dac Nhat, Tran Dinh Ha et al.(Dept. of Nucl. Med., Bach Mai Hospital, Hanoi-VIETNAM).

61 Graves'disease patients treated by I-131, were followed for a long term from 4 to 9 years.The mean follow-up time was 6.1 years.For 4 years after I-131 treatment,they didn't appear recurrent hyperthyroid. Incidence of euthyroid was 85.3%.At 6.1year time after treatment,incidence of hypothy - roid was14.8%,so cumulative hypothyroid rate was 2.4%per year.Thyroid nodule wasn't detected on thyroid scintigrams of patients.

IS-5

A case report of diffuse ^{131}I-MIBG bone marrow uptake in detecting the neuroblastoma.

K.Ahmed, T.Inoue, K.Aoyagi and K.Endo, Gunma university, department of Nuclear Medicine.

^{131}I-MIBG scintigraphy was performed in 13 a year old girl. she was diagnosed as neuroblastoma and was operated. After 5 years she again complained of back pain. Ultrasonography and Ga-67 scan was normal but there was high level of tumor marker (NSE 78.5). ^{131}I-MIBG study showed the diffuse bone marrow uptake. MRI revealed the diffuse bone metastasis at vertebrae and bone marrow aspiration showed the tumor cell infiltration. After chemotherapy, ^{131}I-MIBG scan revealed no diffuse bone marrow uptake. Bone tumor marker was decreased (NSE 20.3 ng/ml). Bone marrow aspiration revealed no tumor cell infiltration. ^{131}I-MIBG study is useful for detecting the diffuse bone marrow metastasis and also good for evalution of the effectiveness of chemotherapy in patients with neuroblastoma.

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