

عنوان مقاله:

DETERMINATION OF HUMAN ABSORBED DOSE OF ^{67}Ga -DTPA-ACH BASED ON SIDTRIBUTION DATA IN RATS

محل انتشار:

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خلاصه مقاله:

Radiation dosimetry assessment often commences with measuring pharmaceutical biodistribution in rodents . In our investigation , we used a robust description of organ biodistribution (source organs in dosimetry calculations) and whole body activity . In this investigation , we attempted to estimate the radiation absorbed dose ti normal organs following i.v. administration of ^{67}Ga - labeled ACTH by using biodistribution data in normal rats. Methods : Four animals each were sacrificed at 15 , 30, 60 , 120 min and 2 days after injection of 1.2MBq of radiotracer and exsanguinated , and the percentage of infected dose per gram of each organ were calculated . The Medical Internal Radiation Dose (MIRD) formulation was applied to calculate the absorbed radiation dose for various organs.The results show that most of the activity is accumulated in the lung . Nearly all excretion of activity occurred by the renal system , and hepatobiliary excretion was negligible. The lung to blood activity concentration ratio were about four at 15 min and up to six at 30 min post infection. The lungs to muscli ratio were more than 70 at 15 and 30 min post injection. The biodistribution of ^{67}Ga - DTPA-ACTH deminstrated high lung uptake and low muscle and blood uptade , . allowing for early imaging of the lung anomalies and ACTH receptors malignancies

کلمات کلیدی:

MIRD,Internal dosimetry , absorbed dose

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