

Update 4

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11/02/2022

1 Radio-pharmaceuticals

Myocardial perfusion: Thallium-201 chloride was the first pharmaceutical commonly utilised in clinical cardiac perfusion imaging. It's a good agent for imaging perfusion, and many centres still employ it to image the heart. It is not the best agent for imaging because of its extended half-life and low energy X-ray emission, resulting in a higher radiation dosage and inferior image quality than technetium agents. It functions similarly to the K^+ ion (through Na/KATPase) and is rapidly redistributed, beginning 20 minutes after injection[1]. Ischemic heart disease: Nuclear medicine plays a significant role in the identification of ischemic heart disease (IHD), which can be reversible or irreversible, by employing a particular radiopharmaceutical. The most often utilised radiopharmaceuticals in clinical practise are ^{99m}Tc -Sestamibi, ^{99m}Tc -Tetrofosmin, and ^{201}Tl . This research looked at the usage of counts/second/pixel(c/s/p), reversibility percent among arteries (LAD, LCX, and RCA) in assessing ^{99m}Tc -MIBI and ^{201}Tl bio-distribution in both stress and rest, as well as factors impacting reversibility including age, gender, and obesity.