

Clinical indications and labelling procedures influencing in vitro stability and early myocardial uptake of ^{99m}Tc -tetrofosmin

Tuesday, 29 October 2019 23:44 (15 minutes)

^{99m}Tc -tetrofosmin is a lipophilic cationic agent (diphosphine group) used for imaging myocardial perfusion at stress and at rest. The myocardial uptake of technetium ^{99m}Tc -tetrofosmin appears to occur by a passive diffusion process however, the uptake and retention curve models of technetium ^{99m}Tc -tetrofosmin by myocardial tissue are not well established. Particularly early images for myocardial perfusion imaging and stability of ^{99m}Tc -tetrofosmin are not well defined. 15 preparations of ^{99m}Tc -tetrofosmin and 40 patients have been used to study the different parameters part of the process of labeling in order to study the stability of ^{99m}Tc -tetrofosmin and its early uptake at 5 minutes by myocardial muscle. Parameters which have been studied were the PH, temperature of storage, time of agitation and the way of intravenous injection. Radiochromatography was performed at different times during 6 hours and early myocardial uptake was estimated by the ration heart/mediastinum uptake. Early results confirm that constant agitation and storage temperature are influencing the in vitro stability of ^{99m}Tc -tetrofosmin meanwhile clinical indications and the PH of the injected solution of ^{99m}Tc -tetrofosmin are influencing the early uptake of ^{99m}Tc -tetrofosmin by the myocardium.

Primary authors: BOUYOUCEF, Salah Eddine (Department of Nuclear Medicine CHU Bab El Oued, 16000 Algiers Algeria); Mrs FELLAH, Amel (Nuclear medicine department); Dr TAÏBI, Amel (Nuclear medicine department)

Presenters: BOUYOUCEF, Salah Eddine (Department of Nuclear Medicine CHU Bab El Oued, 16000 Algiers Algeria); Dr TAÏBI, Amel (Nuclear medicine department)