Thallium-201 reinjection images can identify the viable and necrotic myocardium similarly to metabolic imaging with glucose loading 

$\text{F-fluorodeoxyglucose (FDG)-PET}$

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We compared the usefulness of $\text{F-fluorodeoxyglucose (FDG)-PET}$ with glucose loading and thallium-201 (Tl) reinjection imaging for determining the viability of the myocardium in 21 patients with an old anterior myocardial infarction. We obtained transaxial views during Tl reinjection imaging performed 10 minutes after post-exercise injection of 37 MBq Tl. PET imaging with 75 g oral glucose loading was performed 60 min after injection of FDG. Wall motion was evaluated by echocardiography. Excellent FDG-PET images were obtained in 19 of 21 subjects in whom plasma glucose levels were below 251 mg/dl. The results of Tl reinjection imaging and FDG-PET imaging were in agreement in 20 of the 21 subjects. Echocardiography demonstrated hypokinesis or akinesis in segments identified as abnormal in imaging studies. Our results showed that Tl reinjection imaging identified the viable and necrotic myocardium similarly to metabolic imaging obtained by FDG-PET with glucose loading.

Key words: myocardial infarction, myocardial viability, $\text{Tl}$ reinjection, positron emission tomography, FDG