

谢文晖,蔡小佳,雷贝,张莉华,黄钢.硝酸甘油介入双核素心肌显像评估冠状动脉性心脏病[J].中国医学影像技术,2010,26(1):142-145

## 硝酸甘油介入双核素心肌显像评估冠状动脉性心脏病

### Assessment of coronary artery disease with the nitroglycerin augmented $^{99m}\text{Tc}$ -

投稿时间: 2009-06-15 最后修改时间: 2009-11-19

DOI:

中文关键词: [活性心肌](#) [铊-201](#)  [\$^{99m}\text{Tc}\$  锝甲氧基异丁基异腈](#) [硝酸甘油](#)

英文关键词: [Viable myocardium](#) [Thallium-201](#) [Technetium Tc 99m sestamibi](#) [Nitroglycerin](#)

基金项目:上海市重点学科建设项目(S30203)。

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中文摘要:

目的 对比观察多巴酚丁胺 $^{201}\text{Tl}$ 负荷-再分布/硝酸甘油介入 $^{99m}\text{Tc}$ -MIBI心肌灌注显像诊断冠状动脉疾病(CAD)及检出存活心肌的作用。方法 对132例临床疑诊CAD而拟行经皮冠状动脉介入治疗患者进行多巴酚丁胺 $^{201}\text{Tl}$ 负荷-再分布/硝酸甘油介入 $^{99m}\text{Tc}$ -MIBI心肌灌注显像,全部患者于2周内接受冠状动脉造影,23例心肌梗死患者接受经皮冠状动脉介入治疗(PCI),治疗前及治疗后3个月内采用超声心动图进行随访,判断心室壁活动改善情况。结果 以冠状动脉造影显示狭窄程度 $\geq 50\%$ 为狭窄判定标准,诊断 CAD灵敏度、特异度、准确率分别为93.41%、87.80%和91.67%,检出左前降支狭窄的灵敏度、特异度、准确率分别为93.85%、91.04%和92.42%,左回旋支分别为86.79%、89.87%和88.64%,右冠状动脉分别为81.25%、82.14%和81.82%。23例心肌梗死患者总共207个心肌节段中,再分布 $^{201}\text{Tl}$ 图像发现113个放射性稀疏缺损心肌节段,硝酸甘油介入 $^{99m}\text{Tc}$ -MIBI图像发现52个心肌节段可逆性放射性填充,61个心肌节段未发现放射性填充。超声心动图随访见术前113个再分布 $^{201}\text{Tl}$ 图像异常节段中,47个节段有明显的心室壁活动改善,66个节段无明显改善。以PCI术后心室壁活动改善为心肌存活的指标,硝酸甘油介入 $^{99m}\text{Tc}$ -MIBI显像对存活心肌检测的灵敏度、特异度和准确率分别为87.23%、83.33%和84.96%。结论 多巴酚丁胺 $^{201}\text{Tl}$ 负荷-再分布/硝酸甘油介入 $^{99m}\text{Tc}$ -MIBI心肌灌注显像能准确诊断CAD,有效检出存活心肌,有助于指导CAD诊疗。

英文摘要:

Objective To assess the clinical value of dobutamine  $^{201}\text{Tl}$  stress-redistribution/nitroglycerin augmented  $^{99m}\text{Tc}$ -metho $^{99m}\text{Tc}$ -xyisobutylisonitrile (MIBI) gated myocardial perfusion imaging (MPI) in patients with coronary artery disease (CAD). **Methods** A total of 132 patients with suspected CAD underwent dobutamine  $^{201}\text{Tl}$  stress-redistribution/nitroglycerin augmented MIBI gated MPI and coronary arteriography (CAG) within two weeks after MPI. Percutaneous coronary interventions (PCI) were performed in 23 patients with myocardial infarction. The regional wall movement was assessed with echocardiography before and within three months after PCI. **Results** Taking stenosis  $\geq 50\%$  as standard of CAD, the sensitivity, specificity and accuracy of dual-isotopic SPECT imaging in diagnosing CAD was 93.41%, 87.80% and 91.67%, respectively. The sensitivity, specificity and accuracy in diagnosing left anterior descending artery (LAD) stenosis was 93.85%, 91.04% and 92.42%, for left circumflex artery (LCX) was 86.79%, 89.87% and 88.64%, while for right coronary artery (RCA) was 81.25%, 82.14% and 81.82%, respectively. Of all 207 myocardium segments in 23 patients with myocardial infarction, radioactivity defect was found in 113 segments on the redistributed  $^{201}\text{Tl}$  images, and radiofilling was found in 52 (52/113) segments on the nitroglycerin augmented  $^{99m}\text{Tc}$ -MIBI images, whereas 61 segments had no radiofilling. Taking regional wall movement improvement as the criterion of viable myocardium, the sensitivity, specificity and accuracy of identifying viable myocardium with nitroglycerin augmented  $^{99m}\text{Tc}$ -MIBI imaging was 87.23%, 83.33% and 84.96%. **Conclusion** Dobutamine  $^{201}\text{Tl}$  stress-redistribution/nitroglycerin augmented  $^{99m}\text{Tc}$ -MIBI gated MPI is able to effectively detect CAD and viable myocardium and helpful in diagnosis and treatment of CAD.

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