中国医学影像技术
CHINESE JOURNAL OF MEDICAL IMAGING TECHNOLOGY

魏凤,李玉宏.斑点追踪技术观察心肌缺血患者左心室心肌力学改变[J].中国医学影像技术,2011,27(1):57~60

斑点追踪技术观察心肌缺血患者左心室心肌力学改变

Speckle tracking imaging in the evaluation of left ventricular mechanical changes in patients with myocardial ischemia

投稿时间： 2010-08-23 最后修改时间： 2010-10-18

DOI：

中文关键词：斑点追踪显像 应变 心肌缺血 心室功能,左

英文关键词:Speckle tracking imaging Strain Myocardial ischemia Ventricular function, left

基金项目：

作者	单位	E-mail
魏凤	辽宁医学院第一附属医院超声科,辽宁 锦州 121001	
李玉宏	辽宁医学院第一附属医院超声科,辽宁 锦州 121001	yuhongli2@hotmail.com

中文摘要：

目的 探讨二维超声斑点追踪显像(STI)技术评价心肌缺血患者力学改变的应用价值。方法 70例心肌缺血患者(心肌缺血组)和35名健康志愿者(对照组)分别接受STI检查,采用18节段法采集左心室心肌的纵向、径向及圆周应变峰值、达峰时间,对比两组相应节段的差异;采集左心室短轴基底部和心尖部旋转角度峰值、达峰时间,并计算左心室整体扭转角度峰值、达峰时间;比较两组心尖及心底舒张早期旋转角速度峰值(A-vel及B-vel)。结果 心肌缺血患者各缺血节段纵向、径向及圆周应变峰值均较对照组减低,且达峰时间均明显延迟,除后壁纵向应变外,差异均有统计学意义(P均<0.05);心肌缺血患者左心室基底部、心尖部旋转角度峰值及左心室整体扭转角度峰值与对照组比较均减低,且达峰时间均延迟,差异均有统计学意义(P均<0.05);心肌缺血组A-vel明显低于对照组(P<0.05);而B-vel两组差异无统计学意义(P＞0.05)。结论 STI能定量检测心肌缺血患者的左心室多方力学改变,评价心肌局部功能。

英文摘要：

Objective To evaluate the application value of two-dimensional ultrasound speckle tracking imaging (STI) in assessing mechanical changes in patients with myocardial ischemia. **Methods** Seventy myocardial ischemia patients and 35 healthy volunteers underwent STI examination. Peak value of longitudinal, radial and circumferential strain (LS, RS and CS) of left ventricle, and the time to peak were obtained with 18-segment model and were compared. The peak basal and apical rotation of left ventricular minor axis and the time to peak were gathered, the peak value of left ventricular whole reverse angle and time to peak were calculated. Peak angular velocity of diastole early time at apex and bottom (A-vel and B-vel) were compared between the two groups. **Results** Compared with control group, peak value of LS, RS and CS decreased in each ischemia stage and time to peak obviously retarded, there were statistical significant differences except posterior wall (P<0.05). The peak basal and apical rotation of left ventricular minor axis and the peak value of left ventricular whole reverse angle were all smaller than those of control group, and the time to peak retarded (all P<0.05). The A-vel of myocardial ischemia patients was obviously lower than that of control group (P<0.05), but the B-vel were not statistical different between two groups (P＞0.05). **Conclusion** STI can quantitatively detect mechanical changes of left ventricle in patients with myocardial ischemia and assess the partial function of cardiac muscles.

查看全文 查看/发表评论 下载PDF阅读器