

论著

超声二维斑点追踪显像技术评价肥厚型心肌病左心室旋转和扭转运动

谢明星, 张丽, 吕清, 王新房, 韩伟, 张静, 刘莹莹, 付倩, 项飞翔

华中科技大学 同济医学院 附属协和医院超声诊断科 湖北省分子影像重点实验室, 武汉 430022

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摘要 摘要:目的 采用超声二维斑点追踪显像技术(STI)探讨肥厚型心肌病(HCM)患者左心室扭转运动(LVtw)的特征。方法 随机选取心功能正常的HCM患者及正常对照者各20例,取胸骨旁左心室心尖和心底短轴观二维图像对左心室旋转进行测量分析,计算心底部旋转角度峰值(MV-Prot)及其达峰时间、心尖部旋转角度峰值(AP-Prot)及其达峰时间、扭转角度峰值(Ptw)及达峰时间、收缩期末扭转角度(AVCtw)、等容舒张期末扭转角度(MVOtw)、解旋率(Untw R)、解旋减半时间(HTU),并比较两组间上述各参数的差别。结果 (1)与对照组相比,HCM组MV-Prot、AP-Prot、Ptw、AVCtw、MVOtw和HTU测值增加,Untw R测值减低(P均<0.05)。(2)HCM组左心室扭转角度达峰时间测值较对照组明显增加(P<0.05)。(3)HCM组内左心室旋转心尖部达峰时间较心底部测值明显增加(P<0.05)。结论 应用STI可无创性评价HCM患者左心室旋转及扭转运动特征,HCM患者左心室旋转运动力学参数较正常人有明显异常改变。

关键词 [超声心动描记术](#); [超声二维斑点追踪显像技术](#); [肥厚性心肌病](#); [左室扭转](#); [左室旋转](#)

分类号

Left Ventricular Rotation and Twist in Patients with Hypertrophic Cardiomyopathy Evaluated by Two-dimensional Ultrasound Speckle-tracking Imaging

XIE Ming-xing, ZHANG Li, L Qing, WANG Xin-fang, HAN Wei, ZHANG Jing, LIU Ying-ying, FU Qian, XIANG Fei-xiang

Hubei Provincial Key Laboratory of Molecular Imaging, Department of Ultrasound, Union Hospital of Tongji Medical College, Huazhong University of Science and Technology, Wuhan 430022, China

Abstract ABSTRACT: Objective To assess the left ventricular rotation and twist in patients with hypertrophic cardiomyopathy (HCM) by 2-dimensional ultrasound speckle-tracking imaging (STI). Methods Two-dimensional images of left ventricle (LV) at basal and apical short-axis views were acquired in 20 patients with HCM and 20 healthy subjects to evaluate LV rotation. LV twist were defined as rate of apical LV rotation to the basal. Peak rotation (Prot) and the time to Prot in basal and apical short axis views were measured separately. Peak twist (Ptw), twist at aortic valve closure (AVCtw), twist at mitral valve opening (MVOtw), untwisting rate (Untw R), and half time of untwisting (HTU) were calculated. Results Compared with the control group, the value of Prot-MV, Prot-AP, Ptw, time to Ptw, AVCtw, MVOtw, and HTU significantly increased (all P<0.05) and the Untw R significantly decreased (P<0.05) in the HCM group. In the HCM group, time to Prot in apical view was significantly higher than that in basal view. Conclusion STI can noninvasively evaluate the characteristics of LV twist and rotation in patients with HCM.

Key words [echocardiography](#) [speckle tracking imaging](#) [hypertrophic cardiomyopathy](#) [left ventricular twist](#) [left ventricular rotation](#)

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通讯作者 谢明星 xiemx64@126.com

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