

芮逸飞, 颜紫宁, 项艰波, 范莉. 实时三维超声心动图、MRI对右心室容量和收缩功能的对比分析[J]. 中国医学影像技术, 2012, 28(11): 2003~2006

实时三维超声心动图、MRI对右心室容量和收缩功能的对比分析

Comparison of real-time three-dimensional echocardiography and MRI in assessing right ventricular volume and systolic function

投稿时间: 2012-06-18 最后修改时间: 2012-07-31

DOI:

中文关键词: [超声心动描记术](#), [三维](#) [心室功能](#), [右](#) [收缩](#)

英文关键词: [Echocardiography, three-dimensional](#) [Ventricular function, right](#) [Systole](#)

基金项目:

作者	单位	E-mail
芮逸飞	南京医科大学附属常州第二人民医院心超室, 江苏 常州 213003	nz-y@sina.com
颜紫宁	南京医科大学附属常州第二人民医院心超室, 江苏 常州 213003	
项艰波	南京医科大学附属常州第二人民医院心超室, 江苏 常州 213003	
范莉	南京医科大学附属常州第二人民医院心超室, 江苏 常州 213003	

摘要点击次数: 306

全文下载次数: 124

中文摘要:

目的 采用实时三维超声心动图(RT-3DE)及MRI对右心室容量及收缩功能进行对比分析。方法 采用RT-3DE、MRI法对30例心血管疾病患者的右心室功能进行分析,测量右心室舒张末期容积(EDV)、收缩末期容积(ESV)及射血分数(RVEF),并比较相关性。采用RT-3DE对98名正常成人的右心室容量及射血分数进行测量。结果 RT-3DE获得的右心室EDV、ESV值明显小于MRI($P < 0.05$),而两者的RVEF值差异无统计学意义。两种方法测量的EDV、ESV、RVEF值均具有较好的相关性($r_{EDV}=0.81, r_{ESV}=0.84, r_{EF}=0.70, P < 0.05$)。RT-3DE测得98名正常成人右心室EDV为(92.47 ± 31.83)ml,ESV为(40.69 ± 17.42)ml,RVEF为(56.47 ± 6.65)%;正常成人女性的右心室EDV小于男性($P < 0.05$),而ESV及RVEF在两性间差异均无统计学意义($P > 0.05$)。不同年龄组的正常成人右心室EDV、ESV、RVEF差异均无统计学意义($F_{EDV}=3.06, F_{ESV}=2.63, F_{RVEF}=0.11, P > 0.05$)。结论 RT-3DE可作为观测右心室收缩功能的一种筛查和初步替代MRI的方法。

英文摘要:

Objective To compare right ventricular (RV) volume and systolic function by real time three-dimensional echocardiography (RT-3DE) and MRI. **Methods** Thirty patients with heart and vascular diseases underwent RT-3DE and MR examination simultaneously. End-diastolic volume (EDV), end-systolic volume (ESV), and ejection fraction of RV (RVEF) were acquired. Then the correction of results of these two methods was analyzed. Meanwhile, RV systolic function of 98 normal adults was analyzed with RT-3DE. **Results** EDV and ESV acquired with RT-3DE were less than those acquired with MRI (both $P < 0.05$), but no statistical difference of RVEF was found. EDV, ESV and RVEF measured with RT-3DE had good correlation with those measured with MRI ($r_{EDV}=0.81, r_{ESV}=0.84, r_{EF}=0.70, P < 0.05$). RV systolic function of 98 normal adults in RT-3DE were acquired, i.e. EDV (92.47 ± 31.83)ml, ESV (40.69 ± 17.42)ml, RVEF (56.47 ± 6.65)%. EDV of normal women was less than that of normal men ($P < 0.05$), but ESV and RVEF had no statistical difference between two sexes. In normal adults, EDV, ESV and RVEF had no statistical difference among different ages ($F_{EDV}=3.06, F_{ESV}=2.63, F_{RVEF}=0.11, P > 0.05$). **Conclusion** RT-3DE can be used as a screening and preliminary alternative technique of MRI in assessing right ventricular systolic function.

[查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)

您是第6332599位访问者

版权所有: 《中国医学影像技术》杂志社

主管单位: 中国科学院 主办单位: 中国科学院声学研究所

地址: 北京市海淀区北四环西路21号大猷楼502室 邮政编码: 100190 电话: 010-82547901/2/3 传真: 010-82547903

京ICP备12000849号-1

本系统由北京勤云科技发展有限公司设计