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## 实时三维超声心动图评价完全性右束支传导阻滞患者左心室运动同步性

### Real-time three-dimensional echocardiography in evaluation on synchrony of left ventricular in patients with complete right bundle branch block

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#### 中文摘要:

目的 采用实时三维超声心动图 (RT-3DE) 评价完全性右束支传导阻滞 (CRBBB) 患者左心室内运动的同步性。方法 对15例CRBBB近端阻滞、13例CRBBB远端传导阻滞患者和健康志愿者 (对照组) 行实时三维超声心动图检查, 获取全容积图像; 应用QLab软件进行分析, 得到左心室、右心室整体及17节段时间-容积曲线, 记录左心室舒张末期容积 (LVEDV)、左心室收缩末期容积 (LVESV)、左心室每搏量 (LVSV)、左心室射血分数 (LVEF) 及左心室16、12、6节段最小容积点时间标准差 (Tmsv-16-SD%、Tmsv-12-SD%、Tmsv-6-SD%); 最大时间差 (Tmsv-16-Dif%、Tmsv-12-Dif%、Tmsv-6-Dif%)。结果 与对照组及CRBBB近端阻滞组相比, CRBBB远端阻滞组LVEDV、LVESV增大, 而LVEF减小 ( $P<0.05$ )。在评价左心室运动同步性的各项指标中, CRBBB近端阻滞组与对照组差异均无统计学意义 ( $P$ 均 $>0.05$ ); CRBBB远端阻滞组Tmsv-16-SD%、Tmsv-12-SD%、Tmsv-6-SD%、Tmsv-6-Dif%、Tmsv-12-Dif%均较对照组增大 ( $P<0.05$ )。结论 实时三维超声心动图能直观、准确评价CRBBB远端阻滞患者左心室内运动同步性, 为临床诊治及预后判断提供准确信息。

#### 英文摘要:

**Objective** To evaluate the systolic synchrony of inter left ventricles in patients with complete right bundle branch block (CRBBB) by using real-time three-dimensional echocardiography (RT-3DE). **Methods** RT-3DE was performed in 15 patients with proximal portion of CRBBB (proximal portion of CRBBB group), 13 patients with distal portion of CRBBB (distal portion of CRBBB group) and 20 healthy controls. Seventeen segmental volume-time curve (VTC) were obtained with QLab software. Left ventricular end-diastolic volume (LVEDV), left ventricular end-systolic volume (LVESV), ventricular stroke volume (LVSV) and left ventricular ejection fraction (LVEF) were automatically calculated. The time of minimal systolic volume of 16-segmental and 12-segmental and 6-segmental standard deviation (Tmsv-16-SD%, Tmsv-12-SD%, Tmsv-6-SD%), as well as the maximum differences (Tmsv-16-Dif%, Tmsv-12-Dif%, Tmsv-6-Dif%) were recorded. **Results** Compared with control group and proximal portion of CRBBB group, LVEDV and LVESV enlarged ( $P<0.05$ ), LVEF decreased ( $P<0.05$ ) in distal portion of CRBBB group. Compared with control group, Tmsv-16-SD%, Tmsv-12-SD%, Tmsv-6-SD%, Tmsv-6-Dif%, Tmsv-12-Dif% and Tmsv-6-Dif% in distal portion of CRBBB group increased ( $P<0.05$ ). **Conclusion** RT-3DE can evaluate the synchrony of left ventricular in CRBBB patients, and provide accurate information for clinical diagnosis and treatment.

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