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## DETECTION THE LEFT VENTRICULAR FUNCTION IN PATIENTS WITH MYOCARDIAL INFARCTION BEFORE AND AFTER INTAKING PHOSPHODIESTERASE INHIBITORS-OLPRINONE BY SPECKLE TRACKING IMAGING

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**Objectives** The aim of this study is to observe the left ventricular global systolic function with spackle tracking imaging (STI) in patients with chronic congestive heart failure after myocardial infarction, and the changes in these patients before and after medication.

**Methods** 26 patients with myocardial infarction and congestive heart failure were included in this study. Within 24 h before and after intaking phosphodiesterase inhibitors-olprinone for 5 days,

conventional echocardiography were performed. Two-dimensional echocardiographic images were recorded from the apical four-chamber view, left ventricular short-axis views at the basal level and apical level of the left ventricle. The global peak systolic longitudinal strain, global peak rotation were assessed by two-dimensional specking tracking imaging (2D-STI) using QLAB 6.0 workstation on mitral tip level, papillary level and apical short axis view of left ventricle, apical four-chamber view. Left ventricular ejection fraction (LVEF) was calculated by bi-plane Simpson's rule. 30 subjects with clinically indicated but negative percutaneous intervention served as controls. Statistical analysis was used to find the difference between the patients and the controls, and patients before and after medication.

**Results** Systolic torsion, systolic longitudinal strain, LVEF increased significantly in patients after medication than those before medication ($p<0.05$), however, which were still lower significantly than that of in the controls ($p<0.01$). Systolic torsion and systolic longitudinal strain was lower in cases with LVEF $< 40\%$ compared with those who had LVEF $> 40\%$ but $<50\%$ ($p<0.05$).

**Conclusions** This study demonstrates that in patients with myocardial infarction, the evaluation of left ventricular systolic function can be accurately accomplished by using two-dimensional speckle tracking imaging; global longitudinal strain can be a useful parameter to investigate the treatment.