

Right ventricular involvement in inferior ST-segment elevation myocardial infarction – incidence and significance in mid and long-term follow-up

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Introduction: Right ventricular (RV) myocardial infarction (MI) is most commonly concomitant to inferior region MI and is a known cause of complications such as arrhythmia, bradycardia, hypotension, and cardiogenic shock. Previous research mostly investigated RV involvement with in-hospital mortality. However, effects on long-term follow-up after discharge are unfully investigated.^{1,2} The aim of our study was to determine the incidence of RV involvement in patients with inferior MI with ST-segment elevation (STEMI) and its significance in mid and long-term follow-up.

Patents and Methods: We retrospectively analyzed hospital records from 1st January to 31st December 2015 to identify patients who were hospitalized in Department of Cardiovascular Diseases of University Hospital Centre Zagreb with inferior STEMI. Identified patients were divided into two groups – with and without concomitant RV involvement. The criteria for RV involvement were ST-segment elevation in leads V3R and/or V4R and a new RV hypokinesia on the echocardiogram. We observed the impact of RV MI on one and five-year survival rates and the incidence of reinfarction in patients with previous inferior STEMI. Follow-up data were collected from hospital records or phone calls.

Results: In total, 111 patients had inferior STEMI. Out of 103 discharged patients, 15 (14.6%) had RV infarction. There was no significant difference between groups with and without RV involvement in one (92.9% vs 98.9%) and five-year survival rates (85.7% vs 93.1%). The group with RV infarction had a higher incidence of reinfarction, however without statistical significance (21.4% vs 5.7%, p=0.147). Our results did not show a statistically significant effect of RV involvement on reinfarction rate and one and five-year survival. We hypothesize that this might be explained by RV's very good ability to recover in the period after revascularization for MI.

Conclusion: It seems that RV involvement should raise an alert in acute settings and close treatment, but less so during period after recovery from MI. Further studies with larger sample sizes are needed to confirm the results of this study.

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LITERATURE

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