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Impact of Pulmonary Hypertension on Long Term Survival in Patients with Acute Myocardial Infarction

*Dragu, R; Agmon, Y; Kapeliovich, M; Hammerman, H
Rambam Health Care Center, Haifa, Israel*

Aim: The aim of this study was to assess the prevalence and long term prognostic significance of pulmonary hypertension (PH) diagnosis in the early phase of hospitalization for acute myocardial infarction (AMI).

Methods: We prospectively studied 1694 consecutive patients admitted with AMI who had echocardiographic examination 24 – 48 hours from admission and pulmonary arterial pressure (PAP) was measurable. The mean follow-up period was 29 months. Logistic regression was used to evaluate the relationship between PH and long term survival.

Results: Normal PAP, mild, moderate and severe PH were diagnosed in 1341 (79.2%), 134 (7.9%), 178 (10.5%) and 41 (2.4%) patients respectively. Long term mortality according to PH strata was 16.0%, 24.6%, 46.6% and 39.0% respectively ($p < 0.0001$). According to Kaplan-Meier survival curves (fig. 1), similar behavior was observed in groups with normal and mild PH as well as moderate and severe PH. The odd ratios for mortality in patients with moderate or severe PH as compared with those with normal or mild PH was 3.02 (CI 2.17-4.22; $p < 0.0001$). After adjusting for age, gender, left ventricular function, right ventricular function and estimated creatinine clearance, moderate and severe PH remained a strong predictor for mortality (OR 1.61 [CI 1.12-2.37; $p < 0.01$]).

Conclusion: The presence of moderate or severe PH in the early phase of hospitalization due to AMI is strongly related to a worse long term outcome.