OSTEOPROTEGERIN IN ACUTE MYOCARDIAL INFARCTION COMPLICATED BY CARDIOGENIC SHOCK: A BIOMARKER SUBSTUDY OF THE IABP-SHOCK II-TRIAL

Poster Contributions
Poster Sessions, Expo North
Saturday, March 09, 2013, 10:00 a.m.-10:45 a.m.

Session Title: MI Complications: Shock, Arrest and Cardiac Rupture
Abstract Category: 1. Acute Coronary Syndromes: Clinical
Presentation Number: 1126-181

Authors: Georg Friedrich Fuernau, Christian Poenisch, Ingo Eitel, Steffen Desch, Suzanne De Waha, Gerhard Schuler, Volker Adams, Karl Werdan, Uwe Zeymer, Holger Thiele, University of Leipzig - Heart Center, Leipzig, Germany

Background: For osteoprotegerin (OPG), a cytokine of the tumor necrosis factor superfamily, a prognostic impact in coronary heart disease and acute coronary syndromes has been shown recently. In acute myocardial infarction complicated by cardiogenic shock (CS) the impact of OPG on outcome has not been investigated, yet.

Methods: In the randomized Intraaortic Balloon Pump in Cardiogenic Shock II (IABP-SHOCK II)-trial 600 patients with CS complicating acute myocardial infarction undergoing early revascularization were assigned to therapy with IABP or no IABP. In 190 patients included at the University of Leipzig, Heart Center blood samples were collected directly during primary PCI. The blood was centrifuged immediately after sample drawing and the serum was immediately frozen at -87°C. OPG was measured with a standard ELISA-Kit. All-cause mortality at 30 days was used for outcome assessment.

Results: OPG levels > median showed higher rates of death at 30 days in Chi²-testing (51.6 vs. 29.5 %, p=0.003) and log-rank-testing (hazard ratio 1.96 [95% confidence interval {CI} 1.25-3.06]; p=0.003). In univariable logistic regression modelling a 10% increase in OPG resulted in hazard ratio of 2.16 (95%CI 1.10-4.24, p=0.03) for probability of death. In a multivariable logistic stepwise regression model including age, diabetes, body mass index, baseline serum creatinine, use of IABP and sex OPG remained the only significant predictor of 30 day mortality (hazard ratio for 10% increase of OPG 2.35 [95%CI 1.18-4.71, p=0.02])

Conclusions: OPG levels at baseline are an independent predictor of short term mortality in acute myocardial infarction complicated by CS.