Abstract: P218

Cardioprotective effect of cyclosporine in acute anterior myocardial infarction complicated by imminent or full cardiogenic shock

Authors:
M J Claeyss, M J Claeyss, P Coussement, P Dubois, D Garcia-Dorado, C Amaz, N Mewton, M Ovize.

1University of Antwerp Hospital - Antwerp - Belgium, 2St-Jan Hospital - Bruges - Belgium, 3CHU de Charleroi - Charleroi - Belgium, 4University Hospital Vall d'Hebron - Barcelona - Spain, 5Hospital Louis Pradel of Bron - Lyon - France, 6Civils Hospices of Lyon - Lyon - France,

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Background: Cardiogenic shock in the context of acute myocardial infarction (AMI) is associated with a poor prognosis. The present study explored the effects of cyclosporine, a drug with potential infarct size-reducing and anti-inflammatory effects, on infarct size and on clinical outcome in AMI patients with imminent or full cardiogenic shock.

Methods: A total of 97 patients with anterior ST elevation myocardial infarction and a Killip class =2 were selected from the CIRCUS (Does Cyclosporine Improve Outcome in ST Elevation Myocardial Infarction Patients) trial. In total, 49 patients received cyclosporin A (CsA) prior to primary percutaneous intervention (PCI), while 48 patients were allocated to a placebo arm. Clinical outcomes included worsening of heart failure during initial hospitalization and a one-year composite endpoint of all-cause death, worsening of heart failure during the initial hospitalization or rehospitalization for heart failure. Exploratory endpoints included ST segment resolution post PCI, infarct size as assessed by peak creatine kinase, and left ventricular end-diastolic remodeling at one year.

Results: There were no significant differences between the two study arms, but there was a trend toward higher Killip class and more proximally located coronary artery occlusion in the control group. Worsening of heart failure during initial hospitalization occurred in 26% of the patients in the treatment arm and in 44% of the patients in the placebo arm (p=0.08). The composite endpoint occurred less frequently in the CsA arm than in the control arm (25% vs 58%, p=0.02). However, after adjustment for baseline characteristics, CsA was no longer associated with improved clinical outcome (adjusted OR: 0.947 (0.429-2.092)). ST segment resolution, infarct size and left ventricular remodeling were comparable for both study arms.

Conclusion: The present study could not prove a cardioprotective effect of CsA as an adjunctive treatment in patients with anterior infarction presenting with Killip class =2.