C10. Left Ventricular Midwall Dysfunction In The Context Of Normal Ejection Fraction In Aortic Valve Disease Predicts Major Adverse Cardiac Events

Umberto Benedetto[1]; Giovanni Melina[1]; Simone Refice[1]; Emiliano Angeloni[1]; Manuel Stefanelli[1]; Brenno Fiorani[1]; Giuseppino M. Ciavarella[2]; Riccardo Sinatra[1]

[1]Dept. of Cardiac Surgery, Policlinico S. Andrea, University of Rome "La Sapienza", Rome, Italy; [2]Dept. of Cardiology, Policlinico S. Andrea, University of Rome "La Sapienza", Rome, Italy

OBJECTIVES: Left ventricular (LV) midwall dysfunction has been shown to predict outcome in the context of normal ejection fraction (>50%) in several clinical conditions. In patients undergoing isolated aortic valve replacement (AVR), LV dysfunction is the most significant, non-acutely occurring, cardiac-related risk factor. Aim of the study was to investigate the association between midwall dysfunction and operative outcome in these patients.

METHODS: In consecutive patients undergoing isolated AVR (n=86, median age 68 years) with normal ejection fraction, LV midwall function was preoperatively assessed by midwall fractional shortening (mFS%). Major adverse cardiac events (MACEs) were investigated after discharge with a median follow-up of 18 months. Multivariate analysis, including mFS%, was conducted to assess independent risk factors for MACEs.

RESULTS: Overall operative mortality was 4/86 (4.6%). Baseline mFS% was more depressed in patients with a concentric LV geometry (p<0.0001). Among echocardiographic parameters of LV function and geometry, mFS% only was independently associated with postoperative MACEs (OR 4.2; 95%CI 2.1 to 9.0; p=0.01). Other risk factors were age (OR 1.1 per 1 year increase; 95%CI 1.02 to 1.20; p=0.007), female sex (OR 4.8; 95% CI: 2.4 to 10.1; p=0.01), preoperative serum creatinine >200?mol/l (OR 5.2; 95%CI 2.3 to 11.1; p=0.01) and emergency (OR 9.4; 95%CI 5.1 to 16.8; p=0.01).

CONCLUSIONS: LV midwall dysfunction identifies a subgroup of patients with aortic valvular disease with preserved LV ejection fraction at higher risk to develop postoperative MACEs at mid-term follow-up. Further studies are needed to confirm these findings.