Valvular Heart Disease

DOES PRE-EXISTING AORTIC REGURGITATION PROTECTS FROM DEATH IN PATIENTS WHO DEVELOP PARAVALVULAR LEAK AFTER TRANSCATHETER AORTIC VALVE IMPLANTATION?

Moderated Poster Contributions
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Background: transcatheter aortic valve implantation (TAVI) is a widely used procedure for high surgical risk patients affected by severe symptomatic aortic stenosis (SSAS). The development of post-procedural paravalvular leak (PVL) represents a risk factor for worse outcome. Aim of this study is to investigate the effect of post-procedural PVL on long-term clinical outcomes and its correlation with pre-existent aortic regurgitation (AR).

Methods: we retrospectively analysed data from patients affected by SSAS undergoing TAVI prospectively collected in the Italian Transcatheter balloon-Expandable Registry (ITER). The presence and the degree of pre-procedural AR and PVL were assessed by Doppler-measurements and stratified as ASE/ESE guidelines: absent-trivial (0/3), mild (1/3), and moderate/relevant ($\geq$2/3).

Results: 1904 patients at 33 centres underwent TAVI between 2007 and 2012. One-hundred thirty-seven patients with 30-day/in-hospital mortality and five patients lost at follow-up were excluded from the analysis. The remaining 1762 patients where included in the study. Median follow-up time was 821 days (IQR 585.75). Median age was 82.5 years (IQR 7.6), 39% were female, Logistic EuroSCORE and EuroSCORE II were 17 (IQR 14.3) and 5 (IQR 5.8), respectively. Baseline AR was absent in 676 patients (40%), 707 (42%) had a mild AR and 312 (18%) presented moderate/relevant AR. After TAVI 1083 patients (63%) did not show PVL, 539 (32%) had a mild PVL and 86 (5%) had at least moderate PVL. Kaplan Meier analysis showed that PVL of any grade influenced negatively the overall survival (HR 1.42; CI 1.17-1.42 p<0.001). The percentage of patients with a functional NYHA class more than II was higher in patients who presented PVL (p=0.076). No protective action of pre-existing AR on overall mortality (HR 1.01; CI 0.74-1.37 p=0.97) and NYHA functional class (OR 0.89; IC 0.48-1.63 p=0.7) was detected in patients that developed PVL.

Conclusion: Pre-existing AR has no protective effect on survival in case of post-procedural PVL. Any grade of PVL negatively affect both overall survival and functional class.