Poster Session

P1812

The effect of pre-procedural significant mitral regurgitation upon mortality after transcatheter aortic valve implantation

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Background: The presence of concomitant mitral regurgitation (MR) is a common issue in patients with severe aortic stenosis and negatively affects patient outcome. Available data regarding MR reduction due to aortic gradient reduction and left ventricular reverse remodeling after transcatheter aortic valve implantation (TAVI) are contradictory.

Purpose: To investigate the prognostic impact of both pre- and post-procedural MR in patients undergoing TAVI.

Methods: Patients with severe and symptomatic aortic stenosis stenosis [effective orifice area (EOA)≤1cm2] referred for TAVI at our institution were consecutively enrolled. Prospectively collected demographic, laboratory and echocardiographic data were retrospectively analyzed. Patients were stratified into two groups according to MR severity: ≤ grade 1 were defined as non-significant and ≥ grade 2 as significant. Change in MR was determined by comparison between baseline and 30-day echocardiogram. Primary clinical endpoint was all-cause mortality, as defined by the criteria proposed by the Valve Academic Research Consortium2.

Results: 263 consecutive patients (136 men, mean age: 80 ± 7.5 years) were included in the analysis. Significant (grade≥2) MR was present in 65 (24,7%) patients, while 198 (75,3%) patients had mild or no (≤ grade 1) MR. Comparing the two groups, patients with significant MR had higher systolic pulmonary pressure (51.3 ± 14.6mmHg versus 42.8 ± 11.2mmHg, p < 0.001), lower ejection fraction (47.4 ± 10.8% versus 51.2 ± 8.2%) and were more dyspnoic (New York Heart Association class IV 18.5% vesrus 2.5%, p < 0.001). The primary clinical end point occurred in 63 (24%) patients during a follow-up period of 26.6 ± 26.8 months. Patients with significant pre-procedural MR displayed greater cumulative mortality (40% versus 18.8%, p = 0.001). Perioperative risk assessed by logistic EuroScore, NYHA class and pre-procedural MR were found to significantly associate to cumulative mortality in a univariate analysis. Performing a multivariable analysis demonstrated that preprocedural MR severity could independently predict cumulative mortality [OR 2.38, B = 0.869 (95% CI 1.2 – 4.6, p = 0.01)] (Figure)

Conclusion: Significant MR is not infrequent in patients undergoing TAVI and appears to independently associate with high increased all-cause mortality.

Abstract P1812 Figure.

