Conclusions MR post TAVI without aortic regurgitation or residual stenosis is a commmon issue and predicts the developemnt of HF and death.

The author hereby declares no conflict of interest

0556

Left atrial strain is a powerful predictor of pulmonary hypertension in patients with severe aortic stenosis

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Background Pulmonary hypertension (PH) is one of the most powerful predictors of outcome in patients with severe aortic stenosis (AS). However, the mechanisms of PH occurring in the setting of AS are not fully understood.

Methods We studied 60 consecutive AS patients referred for preoperative assessment. Echocardiographic measurement: left ventricular ejection fraction (LVEF), mass (iLVM), longitudinal systolic strain (LVS), mean aortic gradient (MAG), aortic valve area (AVA), mitral E/A and E/e' ratios, TAPSE, tricuspid annulus S wave velocity, left atrial volume (iLAV), left atrial longitudinal end systolic strain using speckle tracking (LAS). Right heart catheterization (RHC) measurements: pulmonary artery pressures (s/d/mPAP), pulmonary capillary wedge pressure (PCWP).

Results Patient age was 81±8 years. MAG was 45±16mmHg, AVA 0.74±0.2cm^2, LVEF 63±16% (range 24-87), LVS –16±4%, LAS-4C 17±8% and LAS-2C 18±9%. Intraobserver variability for LAS measurement was 6%, interobserver variability was 7%.
RHC showed: sPAP 51±18mmHg (range 28-101), mPAP 32±11mmHg (range 15-60), PCWP 19±8mmHg. In univariate analysis, the following echocardiographic parameters were associated with pulmonary artery pressures: LVS, mitral E/A and E/e' ratios, mitral E wave deceleration time, TAPSE, tricuspid regurgitant flow velocity (feasibility 72%), LAS 4-C (feasibility 100%), and LAS 2-C (feasibility 94%). In multivariate analysis, except for the tricuspid regurgitant velocity, only LAS was independently associated with sPAP (r=–0.68, p<0.001). ROC analysis showed that a LA strain <13% predicted severe PH (sPAP >55mmHg) with a sensitivity of 85% and a specificity of 78%.

Conclusion LAS measured by speckle tracking analysis is a simple and reproducible parameter and is a strong predictor of PH in patients with severe AS. These results suggest the LA reservoir function is a critical determinant of sPAP in AS. The prognostic value of LA strain should be further assessed.

The author hereby declares no conflict of interest

0304

How long should we keep a temporary pace maker after transcatheter aortic valve replacement (TAVR)

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A temporary pace-maker (TPM) is often used after TAVR due to the risk of atrioventricular block (AVB) in the following days, related to progressive conduction system injuries. However guidelines are unclear as when to safely remove it. Between 2013 and 2014, 195 patients without previous permanent pacemaker, were prospectively followed after TAVR (69 Edwards Sapiens (ES) and 126 CoreValve (CV)). 47 had preoperative bundle branch block, 23 left (LBBB), 24 right sided (RBBB). Peri-operative high degree AVB was noted in 37 patients (20%). 24 were transient, less than 10mn and; 13 persisted at the end of the procedure and were implanted with a permanent pace-maker. New LBBB was observed in 55 patients (28%). In the post-operative period, 23 patients (13%) developped AVB (20 patients within 5 days, and 3 patients after 7 days) (4 ES and 19 CV). No new AV block had occurred at one month in the remaining population. Risk factors for late AVB were peri-operative transient AVB (40%), post-operative RBBB (30%), or LBBB (20%); preexistent RBBB and Corevalve model. Conversely 41 of the 42 patients without AVB or bundle branch block did not need temporary pacing in the post operative time. The only patient without any perioperative event who developed a late AV block at day 7 had a CV inserted in an old surgical valve. However, sinus dysfunction occurred in 2 patients treated with amiodarone for atrial fibrillation in the post operative period, needing temporary pacing. **Conclusion:** The use of TPM after TAVR is common for the management of delayed high degree AVB. The main risk factors are peri-operative AVB and post-operative BBB. Most of delayed AVB occur within 5 days. Later AVB preceded by prolonged PR interval and BBB should increase the length of TPM. However, in the absence of these factors TPM could be shortened.

The author hereby declares no conflict of interest
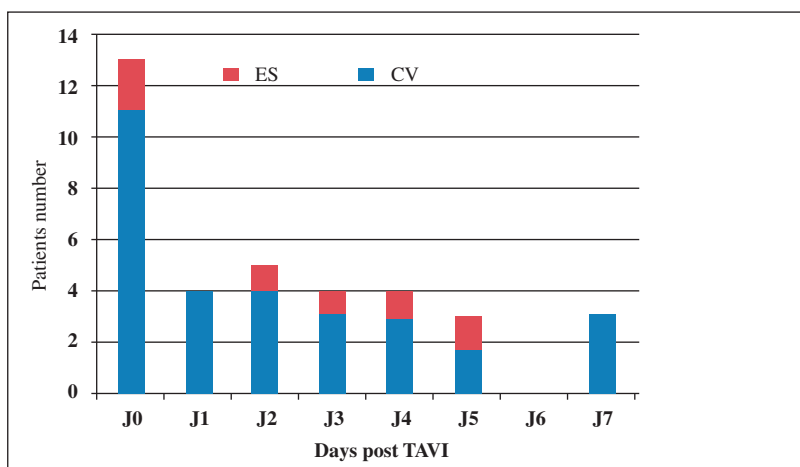
Abstract 0304 – Figure: Time occurence of AVB (CV=Corevalve, ES=Sapien)