TCT-870
Frailty Assessment Tools – Impact on short term outcome after TAVI
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Background: Older patients (pts) with aortic valve stenosis suitable for transcatheter aortic valve implantation (TAVI) have an increased operative risk due to advanced age and co-morbidities. However current risk scores have shown not to be the ideal tool to predict postinterventional outcome in this population. Frailty especially seems to be one of the major factors not included into these scores. Therefore aim of this study was to elucidate whether frailty assessment helps to predict outcome after TAVI.

Methods: Pts were assessed prospectively regarding there over all appearance by two independent physicians and a numerical score from 1 (frail)-10 (good condition) was given. Additionally Katz activity score, gait speed testing, a five feet walk test and a hand grip strength test were performed. After 30days follow-up hemodynamic, clinical data as well as VARC safety endpoints were analysed.

Results: A total of 75pts (age 81±6years) with a logEuroSCORE of 20.6±12.7% were treated. Almost 6 of the pts received a Medtronic CoreValve and 19 an Edwards SAPIEN XT, two of them as valve-in-valve. The prostheses were successfully implanted in all pts. The mean gradient declined from 67.0±12.3 to 12.0±7.5mmHg. VARC success was achieved in 97.3%. The combined safety endpoint occurred in 24%. One pt died due to intracranial haemorrhage and one major stroke was noted. Thus major stroke and death occurred in 2.67%. Mean appearance score was 6.3±1.7, mean Katz activity score 5.4±1.4. Mean time to overcome five-feet was measured 8.5±4.2s. Mean hand grip strength of the dominant hand was 20.2±9.5Kg. There was no significant predictive value of hand grip strength and Katz score using a regression analysis (p=0.938; 0.925-1.089; p=0.301; 0.526-1.222). The reduced walking speed failed to reach the level of significance in this relatively small cohort (p=0.06; 0.991-1.529). Only the overall appearance score had significant predictive value for the occurrence of the combined safety endpoint (p=0.015; 0.280-0.837).

Conclusions: TAVI in older pts with higher risk is safe, feasible and reliable. Frailty assessment provides additional information but individual clinical judgment remains crucial to insure beneficial outcome.

TCT-871
Leveraging Preparatory Balloon Aortic Valvuloplasty (BAV) During TAVI for Improved Valve Sizing – A simple way to reduce Paravalvular Aortic Regurgitation (PAR)!!
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Background: Valve-size selection for TAVI is based on annular measurements by echocardiography or CT. Still, relevant PAR with negative impact on survival is common(20%). We sought to evaluate whether supraaortic angiography during BAV may provide improved sizingsignure.

Methods: Data of 167 consecutive pts with conventional sizing (echo,CT) (group 1) were compared to 103 successive pts, in which BAV was, additionally leveraged for size-selection (group 2). PAR was graded angiographically (Sellers criteria) and quantitatively using the pressure difference between diastolic aortic pressure and LVEDP (ΔP DAP–LVEDP) and the myocardial supply-demand ratio (DPTI:SPTI), a ΔP DAP–LVEDP≥18 mmHg and a DPTI:SPTI≥0.7 having previously been proposed as cut-off values associated with increased cardiovascular mortality.

Results: TAVI was successful in all pts (ES:166,MCV:103), PAR was observed in 113pts of gp1 and 41pts of gp2 (67vs40%, p<0.05). At least Moderate PAR, a ΔP DAP–LVEDP≥18 mmHg and a DPTI:SPTI≥0.7 were observed more frequently in gp2 than gp1: 14.4±4.7% vs 33.0±10.6%, p<0.05. According to preinterventional imaging, 40pts had a borderline annulus size, raising uncertainty regarding valve-size selection. Balloon-sizing resulted in selection of the “bigger” prosthesis in 21pts; only 2 of these pts had relevant PAR. Cardiovascular mortality at 30 day, 1-year and 2-year were significantly decreased in gp2 compared to gp1 (5.8±6% vs 10.6±20%, p<0.05; no BAV-complications).

Conclusions: Preparatory BAV during TAVI can be leveraged to improve valve-size selection and reduce associated PAR, especially in borderline cases.

TCT-872
Results of transfemoral TAVI in Partner-like Patients – A comparison with Real-World Patients
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Background: TAVI is currently transforming the treatment of non-operable and high-risk pts with aortic stenosis, and the randomized PARTNER trial has shown excellent results. Notably, several pts. with comorbid conditions, which are frequently encountered in a real-world setting, were excluded. However, such pts. are already treated in countries with CE-approval. We report our two-center transfemoral (TF) TAVI-experience with focus on the comparison between real-world and PARTNER-like patients.

Methods: Over 6 years (2006-11) 485 pts. (age: 80±7, EuroSCORE: 22±16%) underwent TF TAVI (ES 176, MCV 309). Patients were divided into a “PARTNER-like” and a “PARTNER-exclusion” group based on PARTNER B inclusion criteria. Differences in 30-day, 1- and 2-year mortality were assessed.

Results: 213 pts. would have been excluded from PARTNER B, most frequent exclusion criteria being prior valve surgery (16%), chronic renal failure (14%), severe mitral regurgitation (11%), reduced LV EF (9%) and prior PCI (6%). Pts. in the “PARTNER-exclusion” group had a higher 1- and 2-year mortality than in the “PARTNER-like” group, and a non-significant trend towards an increased 30-day mortality. Compared to PARTNER-data, “PARTNER-like” pts. had a slightly higher 30-day, but a markedly lower 2-year mortality. Interestingly, 2-year mortality was also lower in excluded pts. despite a two-fold 30-day mortality.