area was 0.57±0.11 cm^2. Following the TAVI procedure mean AV gradient within the supra-annular group was lower by 3.5 mmHg compared to annular group (P<0.001). Rate of Pacemaker implantation during hospitalization was significantly higher among the supra-annular group compare to the annular group (13.9% vs 1.4%, P=0.004). In hospital stay and mortality rates were similar between the 2 groups.
Conclusion: The use of supra annular design valves for TAVI in patients with small AV anatomy resulted with lower post procedural gradients and higher rates of PPM implantation with no effect on major complications or mortality rates.

P2648
Predictors of outcome in heart failure patients with functional mitral regurgitation undergoing mitraclip treatment

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Background: To date, a gap of evidence in daily practice on the prognostic predictors of outcome in patients with functional mitral regurgitation (MR) undergoing MitraClip (MC) remains.
Purpose: The aim of our study is to identify the baseline predictors of long-term outcome in patients with functional MR undergoing percutaneous mitral valve (MV) repair with MC.
Methods: From March 2012 to September 2017, patients with symptomatic moderate-to-severe or severe functional MR undergoing percutaneous MV repair with MC at our institution were consecutively and prospectively enrolled. For all cases, baseline demographic, clinical, echocardiographic and cardiopulmonary exercise test (CPET) data were collected. Successful procedure was defined as a MR reduction to grade ≤2+/4+ after procedure. Primary endpoint was all-cause death; secondary endpoint was the composite of cardiac death or rehospitalization for HF.
Results: 80 consecutive patients (mean age 70.1±8.9 years; 73.7% men) were enrolled. Successful MC implant was observed in the majority of cases (77 of 80, 96,2%). No patients died during procedure but three in-hospital post-procedural death were observed. The median follow-up was 562.5 days (IQR 190.2–1119.0). Along the whole investigation time, the primary endpoint occurred in 30 cases (37.5%); among them, a cardiac etiology was recognized in 16 (53.3%). The secondary endpoint was observed in 27 (33.7%) patients. The overall Kaplan-Meier survival estimates at 6 months, 1, 2 and 3 year were 84.3% (CI: 76.6–92.9), 81.4% (CI: 73.1–90.7), 66.1% (CI: 55.5–78.7) and 59.7% (CI: 48.4–73.6) respectively. At multivariate analysis, atrial fibrillation (AF) (HR: 2.810; 95% CI: 1.168–6.760; P=0.021) significantly and independently increased the risk of all-cause death, whereas the peak of oxygen uptake (VO2) at CPET (HR: 0.686; 95% CI: 0.570–0.825; P<0.001) decreased the risk of all-cause death at follow-up. Furthermore, the peak VO2 (HR: 0.712; 95% CI: 0.591–0.858; P<0.001) has emerged as the only independent predictor for the secondary outcome at follow-up. The ROC curve analysis identified a peak VO2 cut-off of 10.1 mL/kg/min [AUC: 0.805] as the best predictor of the primary endpoint at two years follow-up (sensitivity: 87.9%; specificity: 71.4%). The analysis of overall survival at long-term according to the presence of AF and to the cut-off of peak VO2 at baseline, showed a significantly worse survival in patients with AF (logrank = 0.0036) and with peak VO2 ≤10 mL/kg/min (logrank <0.0001).
Conclusions: In patients with functional MR undergoing percutaneous MV repair with MC, AF and peak VO2 ≤10 mL/kg/min identify patients with poor prognosis at long-term follow-up.

P2649
3D multislice comparing computed Tomography (MSCT) Vs transesophageal echocardiography (TEE) for preprocedural evaluation of left atrial appendage (LAA) and WATCHMAN device sizing

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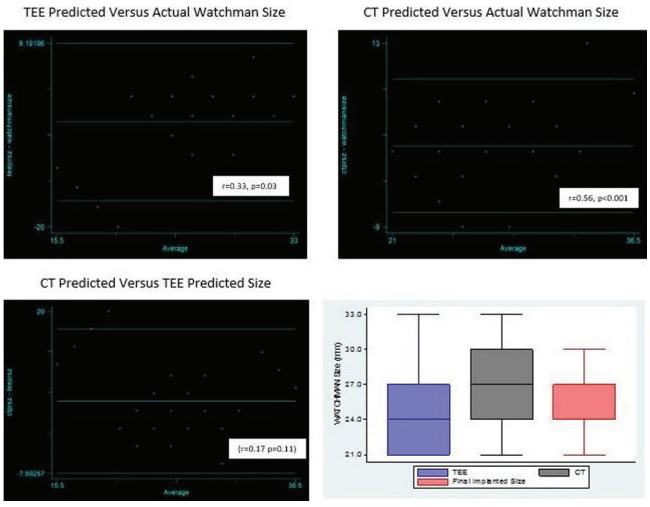
Background: We compared MSCT sizing of maximal LAA ostial diameter and selection of WATCHMAN size with conventional TEE
Methods: Intra-procedural TEE and preprocedural MSCT data from 50 consecutive patients undergoing LAA closure with WATCHMAN device was evaluated. Hypothetical WATCHMAN device size was calculated separately by TEE (as per WATCHMAN's IFU recommendations), and MSCT. These were then compared to the final implanted WATCHMAN size that met the PASS criteria (position, anchor, size, and seal).
Results: MSCT measured maximum diameter was larger compared to TEE (24.8±4.2 vs 21.2±4.2, p<0.001 respectively) with modest correlation (Person's r=0.53, p<0.01). Agreement between hypothetical WATCHMAN size vs actual WATCHMAN size implanted based on CT was 49% (kappa 0.34, p<0.001), correlation r=0.56, p<0.001. Agreement between hypothetical WATCHMAN size vs actual WATCHMAN size implanted based on TEE was 35% (kappa 0.2, p=0.006); modest correlation (Pearson's r=0.33, p=0.03). (Figure 1)



Conclusion: Preprocedural MSCT appears to be better than conventional TEE for LAA ostial measurement and selecting appropriate WATCHMAN device size.

P2650
Left atrial remodeling and brain natriuretic peptide levels variation after left atrial appendage occlusion

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Background: Few data are available about BNP variation and left atrium remodeling after left appendage occlusion (LAAO) technique.
Methods: Prospective study, including all consecutive patients successfully implanted with a LAAO device. Contrast-enhanced cardiac computed tomography (CT) performed before and 6 weeks after the procedure with reverse left atrial remodeling define by an increase in LA volume >10%, together with blood sampling obtained before, 48 hr after device implantation and at the first visit after discharge (30–45 days) for BNP measurement.
Results: Among the 44 patients implanted with a complete dataset, mean End-diastolic LA volume was 139±64 mL and 141±62 mL at baseline and during follow-up (45±15 days), respectively, showing no statistical difference (P=0.45). No thrombus was seen on the atrial side of the device. Peri-device leaks (defined as presence of dye in LAA beyond the device) were observed in 17 patients (40%) but were trivial or mild. Reverse atrial remodeling (RAR) at 6 weeks was observed in 6 patients (13%). Despite no difference in BNP levels on admission, median BNP levels at 48 Hs was slightly increased in RAR patients when compared with controls. During FU, BNP levels were strictly identical in both groups. These results were not modified even when each RAR case was matched with 2 controls on age, LVEF, creatinine levels and ACE inhibitors treatment to avoid potential confounders.
Conclusion: Our study showed that despite the fact that LAAO technique can induce left atrial remodeling measured by CT-scan, it does not seems to impact BNP levels on the follow-up. The results need to be transposed to clinical outcomes of this expanding population, in future studies.

P2651
TAVI procedure and significant paravalvular leaks: angiography-only versus transesophageal-guided

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Background: Transoesophageal echocardiography (TOE) can guide the positioning of transcatheter aortic valve implantation (TAVI), thereby decreasing the risk of paravalvular leak (PVL) or mitral valve injury. Studies comparing the incidence of significant PVL in TOE-guided TAVI versus Angiography-only TAVI are lacking.
Purpose: Evaluate predictors of significant PVL, especially TOE-guided TAVI versus Angiography-only TAVI.
Methods: Single centre prospective registry including 162 patients between Dec/2015 and Nov/2017. The decision for TOE-guided TAVI versus Angiography-only TAVI was based upon operator experience and anaesthesiology availability. All patients underwent MDCT before the procedure. Area cover index was defined as: 100 * [(valve area – aortic annulus area) / valve area]. Eccentricity index was defined as: 100 * [1 – (LVOT minimum diameter / LVOT maximum diameter)]. At discharge all patients underwent transthoracic echocardiography (TTE). According to VARC II criteria, PVL ≥ moderate was defined as significant. Univariate and multivariate analysis were conducted.