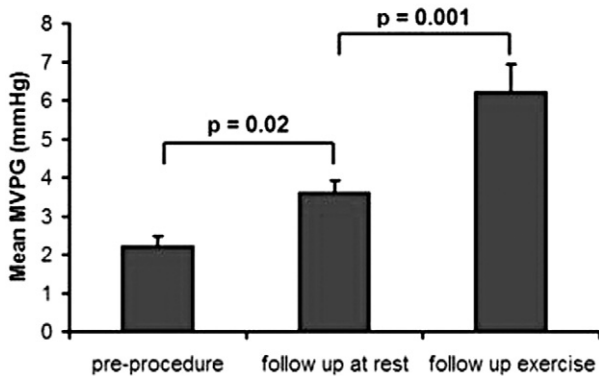


2.2±1.9 mmHg pre-procedural to 3.6±1.7 mmHg at follow up in rest (p=0.02) and to 6.2±2.7 mmHg (p=0.001) during exercise. The maximum MVPG also significantly increased from 6.1±3.4 mmHg pre-procedural to 9.9±3.3 mmHg at follow up in rest (p=0.002) and during exercise to 13.7±4.6 mmHg (p= 0.003). Heart rate and systolic blood pressure increased both significantly during exercise.

**Mitral Valve Pressure Gradient before and after MitraClip (n=23)**



**Conclusions:** MitraClip implantation results in an expected increase of transmitral pressure gradient during exercise, however with no evidence of clinically significant mitral stenosis.

#### TCT-793

##### Effects of Preoperative Tricuspid Regurgitation on Mitral Regurgitation Treatment with the MitraClip Device in High-Risk Patients

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**Background:** Purpose of the study is to characterize high-risk patients with mitral regurgitation (MR) treated with the MitraClip device (Abbott Vascular, Abbott Park, Illinois) and to assess the impact of preoperative TR≥3+ on the outcomes at mid-term follow-up after MitraClip treatment.

**Methods:** From November 2008 to March 2012, 106 consecutive patients with degenerative and functional moderate to severe or severe MR underwent MitraClip implantation at our institution. All the patients were assessed by a preoperative standardized protocol, which included TEE, angiography and evaluation of the surgical risk. The functional status was assessed by 6MWT, while quality of life was evaluated by MLHFQ and SF-36 questionnaires. Short and mid-term outcomes of patients with and without concomitant TR≥3+ (TR group and no-TR group, respectively) were compared.

**Results:** Preoperative TR≥3+ was present in 21/106 patients (19.8%). Patients of the 2 groups were similar for age, comorbidities and surgical risk. Functional etiology was present in 71.4% of the TR group and in 70.6% of the no-TR group (p=0.9). Preoperative echocardiography showed similar LVEDD (p=0.5) and LVEF (p=0.4). Patients of the TR group had worse quality of life (MLHFQ 44.7 Vs 36.9- p=0.04; SF-36 physical domain 30.4 Vs 36.6 -p=0.004). In-hospital mortality was 0% in TR group and 1.2% in no-TR group (p=0.6). Similar reduction of MR to ≤2+ before discharge was achieved in the 2 groups (TR group=90.5%, no-TR group=91.6%, p= 0.8). At 1 year follow-up, actuarial survival was 79.4±10.6% for TR group and 91.1±3.9% for no-TR group (p=0.5) while freedom from MR≥3+ was 67.7±12.1% for TR group and 85.1±5.1% for no-TR group (p=0.04). At last follow-up (mean 9.2 months, range 1-41 months), overall freedom from death, MR≥3+ and rehospitalization for HF was 47.6% for TR group and 69% for no-TR group (p=0.06). The presence of preoperative TR≥3+ was identified as predictor of recurrence of MR≥3+ (OR 3.75).

**Conclusions:** TR is associated with more impaired QoL in MitraClip candidates. Moreover, in patients with significant TR, the recurrence of MR≥3+ and the incidence of death, MR recurrence and rehospitalization for HF result higher at mid-term follow-up.

#### TCT-794

##### Percutaneous closure of para valvular mitral prosthetic regurgitation with AVPIII device

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**Background:** Percutaneous closure of mitral valve periprosthetic leak (MPL) is being sought as an alternative to repeated surgery. Different device have been used to percutaneous repair. Objective: Describe our population undergoing percutaneous closure with Amplatzer Vascular Plug III® (AVPIII), and assess clinical events.

**Methods:** Prospective registry of all patients (p) were treated percutaneously for at least 1 MPL. AVPIII device used. Procedural success: device was implanted and the MPL regurgitation decreased. Device failure: death or new intervention on the same MPL at 30 days.

**Results:** Fifty four p, age 67±12years, 94% with mechanical mitral valve; number of surgery on the mitral valve 2.1±0.9. Time from last surgery to percutaneous intervention 9.8±7.8years. Clinical heart failure 89.2% and hemolytic anemia 88.4% was indication. NYHA functional class 3.3±0.6, hematocrit 28.7±4.8%, and MPL regurgitation grade 3.2±0.8. Euroscore log 19.3±13.2. 59 MPL initially were attempted to close in 63 procedures. A 2° procedure was done 9 MPL and 3° attempt in 1 MPL, with AVPIII implant success in 96.2% of p. 3p simultaneous closure of MPL and aortic leak were done. Seventy AVPIII were initially implanted in 52p. MPL regurgitation decreased grade1,3±0.7. Complications of procedure: embolization 1p(captured and implanted in the same procedure), impingement mitral prosthetic disc 4p(emergency surgery 2p) and permanent pacemaker 1p. Procedure success 92.5%p. Clinical events at 30 days: Percutaneous reintervention residual regurgitation 3p, mitral valve surgery 1p, stroke 1p, hospitalization for heart failure 6p and death 2p. Clinical success in 85.1%p. Follow-up. Improvement NYHA functional class in at least 1 grade occurred in 80% (p=0.03). NYHA functional class 2.53±0.9(p=0.03), hematocrit 34.1±5%(p=0.01), and MPL regurgitation 2.2±1.3 (p=0.04).

**Conclusions:** Percutaneous repair of MPL is a feasible alternative with a high immediate technical success rate, and few complications. At follow up, recovery of both functional class, hematocrit and decrease of at least 1 degree regurgitation was observed. Patients can undergo reintervention for residual or new leak.

#### TCT-795

##### Procedural success is improved with a 2nd MitraClip placement without additional complications

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**Background:** Suboptimal result of the MitraClip procedure (Abbott Vascular, Santa Clara, California) might be related to inadequate number of clips. In some cases of the MitraClip procedure, 2nd clip is required to be placed for residual mitral regurgitation (MR) after 1st clip placement. However the reports of the 2nd clip placement outcome are sparse.

**Methods:** We retrospectively investigated 70 out of 148 MitraClip procedures (47.3 %) that required 2nd clip placement (46 men, mean age 72.1 ± 13.1 years, 40 functional MR cases). Procedural success was defined as MR severity ≤2+ after clip placement. The 1st clip time is defined as the time from 1st clip delivery system (CDS) insertion until 1st clip placement. And 2nd clip time is defined as the time from 2nd CDS insertion until 2nd clip placement.

**Results:** Procedural success was achieved in 67 of 70 cases (95.7%). In failed 3 cases, the procedure was aborted for the following reason: increased trans mitral gradient with 2nd clip, inadequate MR reduction and failure of leaflet insertion (2nd clip wasn't released in all 3 cases). There were no complications related to 2nd clip placement (clip detachment, worsening MR, significant mitral stenosis and non-elective cardiac surgery for adverse events). 2nd clip time was significantly shorter than 1st clip time [42.8 ± 22.3 vs. 71.5 ± 42.1 min, p < 0.001]. And there was no significant difference in 2nd clip time between functional and degenerative etiologies [40.3 ± 25.4 vs. 46.0 ± 17.9 min, p = 0.3, respectively].

**Conclusions:** 2nd clip placement further improves MR reduction, and placement time is shorter than 1st clip placement time, without increasing risk.

#### TCT-796

##### The MitraClip Procedure For Functional Mitral Regurgitation Results In A Significant Change In Procedural Hemodynamics

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