Background: Acute hemodynamic changes from the MitraClip (Abbott Vascular, Santa Clara, CA) procedure have been shown for mitral regurgitation (MR) for mitral valve etiology, but have not been elucidated in functional MR alone. There is also a misconception that reducing functional MR may lead to a detrimental change in acute hemodynamics.

Methods: A retrospective review was performed on 85 consecutive patients with functional MR (mean age 76±11 years, 30% (35%) females) who had full set of hemodynamics prior to and after the MitraClip procedure. 57 (67%) patients were included in the high-risk registry (mean STS score 14.9±7.4%) with 78% (92%) in NYHA functional class III or IV and 77% (91%) with MR grade 4+. There were 34 (40%) patients with left ventricular ejection fraction (LVEF) ≤ 35% (mean 26±6%); overall mean left ventricular end systolic diameter of 40±10mm.

Results: There were significant improvements in the cardiac index (CI, mean pre CI 2.74±1.92 L/min/m² vs. post CI 3.35±1.92 L/min/m², p<0.001) and mean left atrial pressures (MLAP, mean pre MLAP of 20±7.67 mmHg vs. post MLAP 17.2±5.7 mmHg, p<0.001). Improvements in CI and MLAP was observed in 75/85 (88%) and 50/74 (68%) patients respectively. At a mean follow-up of 13.2±9 months, 76/85 (89%) was an NYHA functional class I or II (from 78/85 (92%) in NYHA class III or IV at baseline, p<0.001) and 71/85 (84%) had MR grade ≤ 2+ (from 85/85 (100%) in MR grade 3+ or 4+ at baseline, p<0.001).

Conclusions: In patients with functional MR, the MitraClip procedure resulted in a significant change in CI and MLAP.

TCT-797
Transcatheter Mitral Valve-in-Valve / Valve-in-Ring Implants For Degenerative Post Surgical Valves: Results From The Global Valve-in-Valve Registry

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Methods: From October 2008, 120 consecutive patients underwent MitraClip implantation at our Institution. At time of study 76 patients have reached 1-year follow-up. We retrospectively analysed in-hospital and 1-year outcome association with pre-operative 3C-HF.

Results: Pre-operative calculated 1-year expected mortality was 35.5%; which was significantly different for FMR and DMR: 43% vs 23.5% (p=0.0018). Overall 30 days mortality was 1.3% (0.0% and 4.2% in FMR and DMR, respectively; p=0.13). Higher 3C-HF score was not predictor of 30d mortality (p=0.36). Higher 3C-HF score was otherwise significantly related to post-operative need of hemofiltration (p=0.0009), ultrafiltration (p=0.007), cardiogenic shock (p=0.01), liver failure (p=0.04), new renal failure (p=0.005), longer stay of length (p=0.01) and need to discharge to rehabilitation (p=0.001). Overall observed mortality at 1-year was 10.5%, which represents a threefold reduction compared to the predicted mortality by 3C-HF. Higher 3C-HF values were associated to higher 1-year mortality (p=0.03). One year mortality was 11.5% and 8.3% for FMR and DMR, respectively (p=0.66). ROC curve analyses showed a predictive cut-off level of 3C-HF of 58% (AUC 0.68, p=0.07). At 1 year higher 3C-HF was also associated to need of re-hospitalization for heart failure (p=0.004) and worse NYHA class (p=0.01). Preprocedural 3C-HF was 51.4±25.6 in patients who had at least one hospitalization within one year from the index procedure, vs 33.7±21.1 in those who did not require hospitalization. QoL tended to be better in patients with lower 3C-HF (p=0.18).

Conclusions: 3C-HF predicts 1-year mortality and symptomatic outcome after MitraClip more robustly it is associated to acute post-operative complications. Observed mortality in patients undergoing MitraClip implantation was three times lower than the expected one year mortality as predicted by the 3C-HF score, suggesting a prognostic benefit of transcatheter mitral repair in hea.

TCT-799
MitraClip feasibility and efficacy in the contest of unfavorable valve anatomy

Nicolò Bazzotti1, Maurizio Taramasso2, Nicola Cioni3, Paolo Denti4

Methods: Transcatheter Edwards SAPIEN (Edwards Lifesciences, Irvine, CA) implantation was performed in all cases (23 mm in 22.9%, 26 mm in 58.6%, and 29 mm in 18.6%). Transcatheter Edwards SAPIEN (Edwards Lifesciences, Irvine, CA) implantation was performed in all cases (23 mm in 22.9%, 26 mm in 58.6%, and 29 mm in 18.6%).

Results: Preoperative 3C-HF was 51.4±25.6 in patients who had at least one hospitalization within one year from the index procedure, vs 33.7±21.1 in those who did not require hospitalization. QoL tended to be better in patients with lower 3C-HF (p=0.18).

Conclusions: 3C-HF predicts 1-year mortality and symptomatic outcome after MitraClip more robustly it is associated to acute post-operative complications. Observed mortality in patients undergoing MitraClip implantation was three times lower than the expected one year mortality as predicted by the 3C-HF score, suggesting a prognostic benefit of transcatheter mitral repair in hea.

TCT-798
The 3C-HF as a new predictor of outcomes after MitraClip

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Methods: Aortic valve-in-valves, transapical aortic valve replacement, tricuspid valve-in-ring implantation was performed in all cases (23 mm in 22.9%, 26 mm in 58.6%, and 29 mm in 18.6%).

Results: Preoperative 3C-HF was 51.4±25.6 in patients who had at least one hospitalization within one year from the index procedure, vs 33.7±21.1 in those who did not require hospitalization. QoL tended to be better in patients with lower 3C-HF (p=0.18).

Conclusions: 3C-HF predicts 1-year mortality and symptomatic outcome after MitraClip more robustly it is associated to acute post-operative complications. Observed mortality in patients undergoing MitraClip implantation was three times lower than the expected one year mortality as predicted by the 3C-HF score, suggesting a prognostic benefit of transcatheter mitral repair in hea.