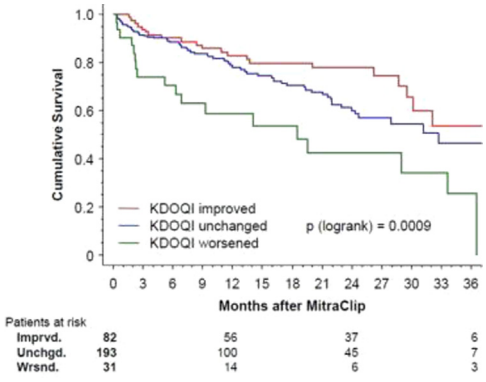
significantly different in the 3 groups (Figure). Compared with pts in whom MC caused no change in RF, there was a trend toward improved survival out to 2 years in pts with acutely improved RF and significantly poorer survival in pts with worsened RF. Multivariate Cox regression analysis revealed ΔKDOQI – next to MC failure, presence of dilated cardiomyopathy, and peripheral arterial disease – as independently predictive of mortality (hazard ratios vs. pts with worsened RF: improved RF 0.31 [p=0.0005], unchanged RF 0.46 [p=0.006]). ΔKDOQI did not impact the rate of rehospitalization for HF.

Conclusions: MC in surgical high-risk pts acutely improves RF in about one quarter of pts. These pts exhibit improved survival compared to those without acute change in RF.



TCT-92

Transcatheter Mitral Valve-in-Valve / Valve-in-Ring Implantations for Degenerative Post Surgical Valves: Results from the Global Valve-in-Valve Registry

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Background: Transcatheter mitral valve-in-valve / valve-in-ring implantation is an emerging therapeutic alternative for patients with failed mitral valves after surgical intervention and may obviate the need for a redo operation. We aimed to evaluate the clinical results of this technique using a large worldwide registry.
Methods: The registry included 134 patients with degenerated mitral valves after surgical intervention (12.7% ring only, median of 9 years post procedure) from 22 centers. Mean age 74.3 ± 11 years; 64.4% female (STS score 16.1 ± 13.1%). The mode of failure was regurgitation (n=64, 47.8%), stenosis (n=34, 25.4%), and combined stenosis and regurgitation (n=36, 26.9%).
Results: Transcatheter Edwards SAPIEN (Edwards Lifesciences, Irvine, CA) implantation was performed in all cases (23 mm in 15.7%, 26 mm in 58.2%, and 29 mm in 26.1%). Procedural access was transapical in 117 cases (87.3%); transseptal in 12 (9%), and through the left atrium via right mini-thoracotomy in 5 (3.7%). Twenty combined procedures (14.9%) included aortic valve-in-valves, aortic valve replacement, tricuspid valve-in-ring implantation, and paravalvular leak closure. Device malposition appeared in 6 cases (4.5% of cases) and post implantation valvuloplasty was utilized in 8%. Post-procedure, mitral valve area was 2 ± 0.6 cm2, valve maximum / mean gradients were 13 ± 6.3 mmHg / 6.4 ± 3, respectively, and significant mitral regurgitation (≥+2) was observed in 5.2% of patients. Median length of hospital stay was 7 days. At 30-day follow-up, all-cause mortality was 8.2%, 1.5% of patients had stroke and 79.2% were at New York Heart Association functional class I/II.
Conclusions: Mitral valve-in-valve/ valve-in-ring implantations, performed in extremely high-risk patients, were clinically effective in most patients with degenerative mitral valves after surgery. The safety and efficacy of this approach will be further examined.

TCT-93

Percutaneous Reduction of Severe Mitral Regurgitation in Elderly High Surgical Risk Patients

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Background: Elderly patients with severe mitral regurgitation (MR) often present with multiple serious co-morbidities including heart failure (HF), and therefore are not considered candidates for mitral valve surgery due to high risk of surgical mortality and morbidity. These patients have limited options as no medical therapy is directed specifically at reducing MR. The MitraClip system has emerged as an important non-surgical treatment option. Results in the high risk octogenarian cohort treated with MitraClip in the EVEREST II studies have not been presented.
Methods: High risk patients age ≥80 years had 3+/4+ MR at baseline and were deemed high risk for surgery as predicted by STS mortality risk score of ≥12%, or surgeon assessment based on pre-specified factors. Echocardiograms were evaluated by an independent core lab. Clinical outcomes at 1 year including change in left ventricular (LV) volume, NYHA class, quality of life (QoL), and hospitalizations for HF were analyzed.
Results: A total of 146 high risk octogenarians (mean age 85 yrs) underwent the MitraClip procedure. Baseline co-morbidities included CAD (80%), prior CABG (47%) and moderate to severe renal disease (33%). Baseline LVEF was 52±14%. Predicted mortality (STS risk score) was 15±8%. Actual 30-day mortality was 7.5%. Despite advanced age and burden of co-morbidities, 84% of octogenarians achieved MR reduction to ≤2+ post-MitraClip and 90% were discharged home. At 1 year, octogenarians showed improvements from baseline in clinical and functional measures (Table 1).

Table 1. Outcomes of Percutaneous Reduction of MR in High Risk Octogenarians

Outcomes Measures	High Risk Octogenarians (n=146)
Freedom from death at 1 year	74%
Freedom from MR >2+ at 1 year in surviving patients	84%
Freedom from mitral valve surgery at 1 year	97%
Improvement in LVEDV at 1 year	-15 ± 28 ml
% patients with NYHA Class III/IV: Baseline → 1 year	87% → 19%
Improvement in SF-36 QoL Physical Component Summary at 1 year	4.1 ± 9.3 points
Improvement in SF-36 QoL Mental Component Summary at 1 year	3.4 ± 11.6 points
Rate of hospitalizations for HF (1-year pre-procedure → 1-year post-procedure)	0.80 → 0.41

Conclusions: In high risk octogenarians, the MitraClip procedure resulted in meaningful improvements in MR severity, LV volumes and QoL. Percutaneous reduction of MR with the MitraClip is a therapeutic option for high risk elderly patients with multiple co-morbidities who are not candidates for surgery.

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