Conclusion: TEER using MitraClip® G4 provides durable MR reduction, reverse ventricular remodeling, and sustained functional improvement in both ischemic and non-ischemic FMR. Non-ischemic etiology is associated with greater structural recovery.

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82142 | SAVV TEER in ccTGA and Surgically Corrected TGA

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Background: In congenitally corrected transposition of the great arteries (ccTGA) and surgically corrected TGA, systemic AV valve (SAVV) regurgitation accelerates systemic RV failure. When surgery is prohibitive, transcatheter edge-to-edge repair (TEER) is a minimally invasive option, but ACHD data are limited.
Methods: We report a single-center case series of four adults with ccTGA and surgically corrected TGA and severe SAVV (morphologically tricuspid) regurgitation, all symptomatic in New York Heart Association (NYHA) class IV. Device platforms included the PASCAL ACE system in three cases and TriClip system in one case. Primary endpoints were acute procedural success and in-hospital complications; secondary endpoints were residual regurgitation and early functional status.
Results: Anatomic contexts comprised: (i) dextrocardia with situs solitus; (ii) Mustard atrial switch; (iii) Mustard atrial switch with severe iliofemoral tortuosity necessitating right internal jugular access; and (iv) interrupted inferior vena cava (azygos continuation) requiring right internal jugular access. Transfemoral transseptal access was feasible in two patients; right internal jugular access was employed in two. Targeted technical adaptations included mirror-image catheter torque management and extreme "S-shaped" system configuration in dextrocardia; baffle puncture in one Mustard patient using the back end of a 0.014″ coronary wire; and traversal/support in the other Mustard patient using the back end of a 0.032″ wire from the transseptal system with aggressive balloon predilatation. TEER implantation succeeded in all four patients (100%), reducing SAVV regurgitation from severe to mild without significant diastolic gradient and with no intraprocedural or in-hospital complications. At follow-up, case (i) with dextrocardia maintained mild regurgitation and improved to NYHA I at 1 year; cases (ii) and (iii) (Mustard) improved to NYHA II at 6 months with sustained mild regurgitation; and case (iv) (interrupted IVC/azygos) remained NYHA II with stable mild regurgitation at 7 years—the longest reported follow-up of SAVV TEER in adult congenital heart disease.
Conclusion: SAVV-TEER in ccTGA/post-atrial-switch TGA is feasible and safe across challenging anatomies.

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82144 | Efficacy and Safety of Combined M- and T-TEER With a Single Triclip SGC: A Retrospective Single Center Study

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Background: Concomitant M- and T- TEER has emerged as a valuable therapeutic strategy for patients with severe MR and TR. This study evaluated the safety, efficacy, and clinical outcomes of combined M- and T-TEER performed with a single TriClip® SGC.
Methods: From January 2022 to December 2024, 47 consecutive patients with moderate-to-severe (3 +) degenerative or functional MR and severe TR in NYHA class III–IV underwent combined M- and T-TEER using a single TriClip® SGC at our center. Propensity score matching was applied to adjust for baseline differences in subgroup analyses. Primary endpoints included procedural success, MR and TR severity reduction, and NYHA class improvement.
Results: The cohort consisted of 47 patients (20 matched pairs; 64% female; median age 77 years). Procedural success was achieved in all cases, with mean device and procedure times of 39.4 ± 6.8 minutes and 71.5 ± 9.4 minutes, respectively. No in-hospital or 30-day major adverse events occurred, except for one atrial septal defect closure (2.1%). During a median follow-up of 0.82 years, heart failure hospitalization occurred in 4 patients (8.5%), with no deaths reported. At 30 days and 1 year, MR ≤2 + was maintained in all patients, with 72.3% having only mild MR at 1 year. MR severity reduction over time was significant ($p<0.001$), with post hoc testing confirming improvement from baseline to 30 days ($p<0.001$) and to 1 year ($p<0.001$), consistent across age ($p=0.66$) and MR etiology subgroups ($p=0.08$). TR severity also improved markedly, with 75% achieving trivial TR and 21% mild TR at 1 year ($p<0.001$), with sustained reduction from baseline to follow-up ($p<0.001$), unaffected by age ($p=0.68$) or MR etiology ($p=0.87$). Functional status improved significantly, with all patients in NYHA class I–II at 1 year; 32% remained fully asymptomatic from 30 days onwards. NYHA class improvement over time was significant ($p<0.001$), with no interaction with age ($p=0.54$) or MR etiology ($p=0.77$).
Conclusion: Combined M-TEER and T-TEER using a single TriClip® SGC is safe, achieves durable MR and TR reduction, and improves functional status across patient subgroups, supporting its role in managing advanced bi-valvular regurgitation.

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82145 | Impact of True ID and Valve Fracture on Gradients After Valve-in-Valve TAVI With Myval

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Background: ViV TAVI is the preferred therapy for degenerated surgical bioprostheses, yet residual gradients, patient–prosthesis mismatch (PPM), and coronary obstruction remain major concerns. This study aims to assess procedural safety and mid-to-long term outcomes in a prospective ViV TAVI cohort.
Methods: This is a prospective single-center cohort of consecutive patients with symptomatic structural valve degeneration (NYHA III–IV) undergoing transfemoral ViV TAVI with MyVal between July 2022 and June 2025. Outcomes followed VARC-3 definitions with echocardiography at discharge, 30 days, and 1 year. Exploratory modeling examined predictors of elevated 1-year gradients and PPM.
Results: Sixty-eight patients (51% female; mean age 77 ± 7 years; EuroSCORE II 7.3 ± 1.8%) were treated. Failure mechanism was stenosis in 50%, regurgitation 22%, mixed 28%; mean true ID 22 ± 3 mm, with 35% ≤21 mm. Valve fracture was performed in 24% (n=16). Commissural alignment was successful in 98.5%. Coronary protection was used in 11.8% (n=8); chimney stenting in 5.9% (n=4), all preserving flow. Technical success was 100%. Thirty-day outcomes: mortality 0%, stroke 0%, MI 0%, new pacemaker 2.9%, major vascular complication 1.5%. Mean aortic gradient decreased from 38.0 ± 9.5 mmHg 8.2 ± 2.4 mmHg at 1 year ($p<0.001$). Aortic valve area increased from 0.80 ± 0.23 cm^2 to 1.88 ± 0.22 cm^2 at 1 year ($p<0.001$). At 1 year, 23.5% had mean aortic gradient ≥10 mmHg. Each 1 mm decrease in true ID increased odds of a 1-year gradient ≥10 mmHg (adjusted OR 1.31; 95% CI 1.04–1.76; $p=0.03$). In small valves (≤21 mm), gradients were higher (9.0 ± 2.5 vs 7.6 ± 2.2 mmHg; $p=0.01$) and ≥10 mmHg more frequent (38% vs 14%; $p=0.01$); valve fracture reduced this risk (21% vs 50%; $p=0.04$). At

median follow-up of 12.8 months, survival was 95.6%, HF hospitalization 4.4%, and no endocarditis, valve thrombosis, or reintervention. NYHA I–II was achieved in 94.1%.
Conclusion: In this prospective single-center study, ViV TAVI with MyVal achieved high technical success, favorable safety, and durable hemodynamics. Smaller true ID was the main predictor of elevated 1-year gradients, while surgical valve fracture mitigated this risk in small valves.

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82148 | Ventricular and Atrial Strain Analysis After M-TEER: A Retrospective Single Center Study

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Background: Ventricular and atrial mechanical changes driving clinical benefit after M-TEER remain incompletely characterized. This study aims to assess LV, RV, and LA reverse remodeling using strain imaging after M-TEER and to examine its association with functional and quality-of-life outcomes.
Methods: Between January 2022 and January 2025, a total of 118 patients with symptomatic (NYHA class III–IV) moderate-to-severe (3+) or severe (4+) degenerative MR (DMR) or functional MR (FMR) underwent TEER at our center. Speckle-tracking echocardiography was performed offline to assess LV GLS, RV-FWS, and LARS. Clinical endpoints included NYHA functional class, heart failure hospitalization, and quality of life assessed by the KCCQ-OS.
Results: Strain analysis was available in 78.0%. Following TEER, LV GLS improved from $-11.8 \pm 3.2\%$ at baseline to $-13.6 \pm 3.1\%$ at 30 days and $-14.1 \pm 3.3\%$ at 1 year ($p<0.001$), despite no significant change in LVEF ($42 \pm 11\%$ vs $43 \pm 10\%$ at 1 year; $p=0.38$). Improvement in LV GLS correlated with NYHA class improvement ($r=0.42$, $p<0.001$) and KCCQ-OS gain ($r=0.39$, $p<0.001$), remaining an independent predictor of KCCQ-OS improvement after multivariable adjustment ($\beta=2.6$ points per 1% GLS improvement; $p=0.002$). RV-FWS also improved from $-15.4 \pm 4.1\%$ at baseline to $-17.1 \pm 4.0\%$ at 30 days ($p=0.002$) and $-18.2 \pm 4.3\%$ at 1 year ($p<0.001$), paralleling a significant reduction in pulmonary artery systolic pressure (48 ± 12 to 38 ± 10 mmHg; $p<0.001$). Patients with $\geq$2% RV-FWS improvement had fewer heart failure hospitalizations at 1 year (7.8% vs 19.4%; $p=0.04$). LARS showed the most pronounced response, increasing from $13.2 \pm 5.1\%$ at baseline to $18.6 \pm 5.4\%$ at 30 days and $21.1 \pm 5.9\%$ at 1 year (both $p<0.001$). LARS correlated strongly with NYHA improvement ($r=0.48$, $p<0.001$) and KCCQ-OS gain ($r=0.51$, $p<0.001$) and emerged as the strongest independent predictor of quality-of-life improvement ($\beta=1.9$ points per 1% increase; $p<0.001$). Combined improvement in LV GLS and LARS explained 46% of the variance in KCCQ-OS gain (adjusted $R^2=0.46$).
Conclusion: M-TEER induces early and sustained ventricular and atrial reverse remodeling, which predicts functional recovery and quality-of-life improvement.

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82151 | Simultaneous PCI-TAVI Versus Pre-TAVI PCI Approach in Patients With CAD Undergoing TAVI: A Retrospective Single Center Study

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Background: The coexistence of severe AS and CAD in patients undergoing TAVI is a common and clinically significant scenario. This study aimed to compare the outcomes of patients undergoing PCI either prior to (Pre-TAVI) or simultaneously with (Simultaneous PCI-TAVI) transfemoral TAVI.
Methods: This retrospective observational study included 212 patients with severe symptomatic AS and angiographically significant CAD, treated between January 2019 and December 2024. Patients were stratified according to PCI timing: staged PCI performed 7–45 days before TAVI (Pre-TAVI PCI group, n=98) or PCI performed during the same procedural session as TAVI (Simultaneous PCI-TAVI group, n=114). Propensity score matching generated 50 well-balanced pairs. The primary endpoint was all-cause mortality at 3 years; secondary endpoints included major bleeding, major vascular complications, transfusion requirements, stroke, myocardial infarction, and unplanned cardiovascular rehospitalization.
Results: In the unmatched cohort, Simultaneous PCI-TAVI was associated with lower rates of major bleeding (4% vs. 10%, $p=0.048$) and transfusion of $\geq$2 red blood cell units (12% vs. 26%, $p=0.014$). These differences remained significant after matching (major bleeding: 2% vs. 10%, $p=0.042$; transfusion: 6% vs. 22%, $p=0.021$). Three-year all-cause mortality was significantly lower in the Simultaneous group in both the unmatched (23% vs. 32%, log-rank $p=0.037$; adjusted hazard ratio [HR] 1.81, 95% confidence interval [CI] 1.03–3.21, $p=0.039$) and matched cohorts (22% vs. 36%, log-rank $p=0.029$; adjusted HR 0.51, 95% CI 0.27–0.95, $p=0.033$). Cardiovascular mortality was significantly reduced with the Simultaneous approach in the matched cohort (6% vs. 24%, log-rank $p=0.021$; adjusted HR 0.23, 95% CI 0.06–0.81, $p=0.022$). No significant differences were observed for stroke, myocardial infarction, or acute kidney injury.
Conclusion: In patients with severe AS and CAD, a Simultaneous PCI-TAVI strategy was associated with significantly lower 3-year all-cause and cardiovascular mortality, reduced major bleeding, and fewer transfusion requirements compared with a staged Pre-TAVI PCI approach.

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82181 | Clinical and Procedural Outcomes of Balloon-Expandable Versus Self-Expanding Valves in TAVI for Bicuspid Aortic Stenosis: An Updated Systematic Review and Meta-Analysis of 5,369 Patients

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Background: Transcatheter aortic valve implantation (TAVI) is increasingly used in patients with bicuspid aortic stenosis (AS), although the optimal valve type remains uncertain. This meta-analysis compares clinical and procedural outcomes between balloon-expandable valves (BEV) and self-expanding valves (SEV).
Methods: A systematic search through Jan 2026 identified 20 studies (unmatched and propensity-matched) including adults with bicuspid AS. Outcomes included mortality, paravalvular leak (PVL), PPM implantation, annulus rupture, and device success. Pooled risk ratios (RRs) with 95% CIs were calculated using random-effects models.
Results: Among 5,369 patients, mortality was similar between BEV and SEV at 30 days (RR 0.81; 95% CI 0.54–1.21; $p=0.31$), cardiovascular 30-