Transcatheter edge-to-edge repair beyond the Cardiovascular Outcomes Assessment of the MitraClip Percutaneous Therapy for Heart Failure Patients with Functional Mitral Regurgitation trial (COAPT): are the exceptions becoming the rule?

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Transcatheter edge-to-edge repair (TEER), most performed using the MitraClip device, has become a cornerstone intervention for patients with symptomatic secondary mitral regurgitation (SMR) who are considered high or prohibitive surgical risk. The COAPT trial (Cardiovascular Outcomes Assessment of the MitraClip Percutaneous Therapy for Heart Failure Patients with Functional Mitral Regurgitation) was a pivotal study that demonstrated significant reductions in heart failure hospitalizations and all-cause mortality in patients with TEER, compared to guideline-directed medical therapy alone, in a carefully selected population with moderate-to-severe or severe SMR, left ventricular ejection fraction (LVEF) between 20–50%, and left ventricular end-systolic diameter (LVESD) <70 mm, who remained symptomatic despite optimal medical therapy . However, as TEER has entered broader clinical use, real-world practice has increasingly included patients who fall outside the strict COAPT inclusion criteria. Patients with more advanced left ventricular dysfunction, severely dilated ventricles, atrial functional mitral regurgitation, or incomplete GDMT have been treated, often with acceptable safety and symptomatic benefit. Data from large registries such as suggest that outcomes in these broader populations may not mirror those of COAPT, particularly regarding survival, but still provide meaningful improvements in symptoms and quality of life. This change in clinical practice reflects a shift from rigid trial-based criteria toward individualized, heart team–guided decision-making. While the COAPT criteria remain essential for prognostication and trial-based benchmarking, clinical equipoise now allows for selective use of TEER in patients previously considered marginal candidates. The role of the multidisciplinary heart team, comprising interventional cardiologists, heart failure specialists, cardiac imaging experts, and cardiac surgeons is crucial in carefully evaluating anatomical suitability, balancing risks and benefits, and ensuring that TEER is appropriately tailored to each patient's clinical profile and goals of care.[1-3]

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LITERATURE

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