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Mitral transcatheter edge-to-edge repair using a deep sedation protocol – initial experience

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Introduction: M-TEER is conventionally performed under general anesthesia (GA) with endotracheal intubation. Observational studies and meta-analyses have shown that deep sedation (DS) provides comparable procedural success and safety with a markedly shorter intensive care unit (ICU) stay, and that post-procedural care outside the ICU shortens hospitalization without increasing complications.[1-4] *Aim*: To report our centre's initial experience with M-TEER under a deep sedation protocol with spontaneous breathing.

Patients and Methods: Retrospective analysis of the first 10 consecutive M-TEER procedures performed under DS between May and October 2026. Sedation consisted of midazolam, fentanyl and propofol, with oxygen via nasal cannula (3-4 L/min), under transesophageal echocardiographic guidance. Endpoints were conversion to GA, procedure duration, ICU admission, post-procedural length of stay, implant success and degree of residual mitral regurgitation (MR) at discharge.

Results: Mean age was 77 ± 6 years (range 67–86) and 5 patients were female. MR etiology was primary degenerative in 3, secondary ventricular in 2 and mixed in 5 patients. Median LVEF was 42.5% (range 30–60%), 5 patients were in NYHA class III–IV, median NT-proBNP was 5,274 pg/mL, and 8 patients had eGFR <60 mL/min/1.73 m². No patient required intubation or conversion to GA. Procedure duration was 44–80 minutes. A clip was implanted in 9/10 patients (one clip in 7, two clips in 2), while one procedure was abandoned after unsuccessful transseptal puncture. Technical success according to the Mitral Valve Academic Research Consortium (MVARC) criteria was achieved in 9/10 patients; no procedural failure was related to sedation. At discharge, residual MR was ≤2+ in 8/9 and ≤1+ in 6/9 implanted patients, with a mean gradient of 3.2 mmHg. No patient required ICU admission, all were discharged 2–5 days after the procedure (median 3 days), and there were no in-hospital deaths.

Conclusion: In our initial experience, M-TEER under deep sedation was feasible and safe in elderly, multimorbid population, with no need for intubation, no conversion to GA and no ICU admission. These results are consistent with published experience and support deep sedation as the preferred strategy for selected M-TEER patients, with potential benefits for patient recovery and hospital resources.

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