

## Physician - Minimal Invasive, TAVI, Robotic Cardiac Surgery

### [MSB-13]

#### Institutional ERAS Applications for Totally Endoscopic Mitral Valve Surgery

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**Objective:** This study aimed to present our institutional protocol for enhanced recovery after surgery (ERAS) and its results in patients who underwent totally endoscopic mitral valve surgery (TEMVS).

**Methods:** One hundred thirteen consecutive patients (63 females, 50 males; mean age: 54.7 years) who underwent TEMVS between 2021 and 2023 were included in this study. The TEMVS was performed using a three-dimensional endoscopic technique. Institutional protocols were as follows: (i) education on operative course and cessation of smoking and alcohol; (ii) anemia; (iii) optimization of blood glucose; (iv) rehabilitation; (v) anxiety and analgesia treatment; (vi) blood conservation techniques such as antifibrinolytic, acute normovolemic hemodilution, mini-incision, meticulous surgery by a three-dimensional endoscope; (vii) postoperative early extubation, prevention of nausea, aggressive analgesia, early mobilization, early removal of tubes; (viii) restrictive transfusion strategy; (ix) early discharge.

**Results:** The rate of intravenous iron therapy for anemia was 26.5%. The repair rate of a degenerative mitral valve was 96.9%. Among all patients, 68.1% did not receive any erythrocyte suspension, and 15.9% had only one unit. The mean extubation time was 5 h. Ninety-six percent of Foley catheters, 87% of all central venous catheters, and 93% of all drainage tubes were removed on the first postoperative day. The rate of respiratory, infectious, and renal complications was 9%, 3.5%, and 3.4%, respectively. The median intensive care unit stay was 1 day, and the median hospitalization time was 5 days. There was one mortality in the early postoperative period.

**Conclusion:** Totally endoscopic mitral valve surgery provides lesser surgical trauma. By the addition of well-established ERAS protocols, less complication, less transfusion, early recovery, and greater patient satisfaction can be achieved.

**Keywords:** Enhanced recovery, ERAS, mitral valve surgery, TEMVS, totally endoscopic mitral valve surgery.