

Physician - Heart Failure, Transplantation and Mechanical Support Systems

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Heartmate 3 In Heart Failure Treatment: Initial Experience of A Newly Established Mechanical Circulatory Support and Heart Transplantation Center

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Objective: This study aimed to share our experience with HeartMate 3 (HM3), a ventricular assist device.

Methods: Seven male patients with the diagnosis of end-stage heart failure underwent HM3 implantation between August 2023 and August 2024. Three patients were INTERMACS (Interagency Registry for Mechanically Assisted Circulatory Support) Stage 1 (42.8%), three patients were INTERMACS Stage 2 (42.8%), and one patient was INTERMACS Stage 3 (14.2%). A bridge to transplant was aimed in 71% of patients, with the rest being destination therapy. One patient underwent reexploration in the early postoperative period due to hemorrhage. Warfarin sodium and acetylsalicylic acid were given for anticoagulation and antiaggregation therapy, with a target INR (international normalized ratio) between 2.5 and 3.0.

Results: Overall support time was between 230 and 395 days, with a mean of 253 days. Two patients developed acute renal failure during the early postoperative period. One patient underwent mediastinal exploration during the early postoperative period due to hemorrhage. One patient developed an outflow graft thrombosis requiring corrective reoperation. This patient died on the first postoperative day due to an intractable right ventricular failure. The mortality rate was 14.2% in this series.

Conclusion: In certain cases with advanced heart failure, patients can be severely impaired and symptomatic despite maximum medical treatment. Since donor organ availability is limited in the current social environment, left ventricular assist device implantation is the only logical option for the treatment of this patient group as a bridge to transplant or destination therapy.

Keywords: Heart failure, Heartmate 3, left ventricular assist device.