

Early mechanical circulatory support is associated with improved outcomes in cardiogenic shock due to end-stage heart failure

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Background: There are few reports of mechanical circulatory support (MCS) in patients with cardiogenic shock (CS) due to end-stage heart failure (ESHF). We evaluated our institutional MCS strategy and compared the outcomes of INTERMACS 1 and 2 patients with CS due to ESHF.

Methods: Retrospective analysis of prospectively collected data (November 2014 to July 2019) from a single centre. ESHF was defined by a diagnosis of HF prior to presentation with CS. Other causes of CS (eg: acute myocardial infarction) were excluded. We compared the clinical course, complications and 90-day survival of patients with CS due to ESHF in INTERMACS profile 1 and 2.

Results: We included 60 consecutive patients with CS due to ESHF. Differences in baseline characteristics were consistent with the INTERMACS profiles. The duration of MCS was similar between INTERMACS 1 and 2 patients (14 (10-33) vs 15 (7-23) days, $p=0.439$). There was no significant difference in the number of patients with complications that required intervention. Compared to INTERMACS 2, INTERMACS 1 patients had more organ dysfunction on support and significant lower 90-day survival (66% vs 34%, $p=0.016$).

Conclusion: Our temporary MCS strategy, including earlier intervention in patients with CS due to ESHF at INTERMACS 2 was associated with less organ dysfunction and better 90-day survival compared to INTERMACS 1 patients.

