Gender Differences in Mechanical Circulatory Support - Insights From a European Registry
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Purpose: Mechanical circulatory support (MCS) is an established treatment option for patients with end-stage heart failure. Although there are numerous reports identifying sex-specific differences with respect to progression and prognosis of heart failure, little is known about gender differences in underlying cardiac diseases, and outcomes were analyzed for gender differences.

Methods: Between January 2011 and June 2014, a total of 1006 consecutive MCS patients were analyzed. Data were obtained from the EUROMACS Registry. Early survival has improved in recent era and is similar to INTERMACS Registry. Late survival is encouraging. Aortic insufficiency and concomitant procedures increase mortality. Elevated PVR and small LV cavity size should be avoided.

Conclusion: This is the largest experience of CF LVADs, along with long-term survival data, at a single center. The patient profile is markedly higher risk than published multi-center INTERMACS Registry. Early survival has improved in recent era and is similar to INTERMACS Registry. Late survival is encouraging. Aortic insufficiency and concomitant procedures increase mortality. Elevated PVR and small LV cavity size should be avoided.

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Characteristics and Outcomes in Patients Receiving Mechanical Circulatory Support With a History of Diabetes
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Purpose: This study compares patients receiving durable mechanical circulatory support (MCS) with severe diabetes (sDB) to those without sDB.

Methods: INTERMACS participants enrolled between 5/2012 and 3/2014 were stratified by sDB status. Pre-implant demographics, clinical characteristics, and laboratory values and post-implant adverse event rates were compared. Patient outcomes were analyzed using Kaplan-Meier survival analysis, competing outcomes, and risk adjusted parametric hazard modeling.

Results: Of the 4672 patients analyzed, 435 (9.3%) had sDB (as diagnosed by the treating hospital). Patients with sDB were more likely to be older, white, INTERMACS Level 3 (stable but nototrope dependent), have additional comorbidities, and be destination therapy. Patients with sDB were less likely to be listed for transplant. The unadjusted three-month survival was 90% for both patients with or without sDB. But after three months, patients with sDB had a worsening survival (see figure, p=0.04). After adjusting for known risk factors for MCS mortality, the early hazard ratio (HR/95% CI) for sDB patients compared to those without sDB was 0.8 (0.6, 1.1) and the late HR was 2.4 (1.4, 4.1). When simultaneously considering the outcomes death, transplant, and recovery, the one year estimated outcomes for sDB patients are 64.3% alive on a device, 23.8% death on a device, and 11.2% transplant, and 0.7% ventricular recovery; while the one year estimates for patients without sDB are 63.6% alive on a device, 18.4% death on the device, 17.4% transplant, and 0.7% ventricular recovery (p=0.002).

Conclusion: MCS patients with and without sDB have similar early survival, but over time the sDB patients experience a comparatively worse survival. At one year, sDB patients are more likely to die on the device and less likely to receive a transplant. This may be due to sDB patients having other comorbidities. These findings should be taken into account when sDB are considered for destination therapy.

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Inclusion of Cognitive and Mood Domains in the Assessment of Frailty Enhances Outcome Prediction in Patients Undergoing Ventricular Assist Device Implantation
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Purpose: To determine the incremental value of cognitive and mood domains in the assessment of frailty in patients undergoing ventricular assist device (VAD) implantation.