Abstract: P5427

**Mid-term comparison of clinical outcomes between continuous-flow left ventricular assist devices**

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**Topic(s):**
Ventricular Assist Devices

**Citation:**
Background: Continuous-flow left ventricular assist devices (cf-LVADs) are increasingly applied in patients with advanced heart failure (HF). Comparative data regarding cf-LVADs are lacking. We aim to determine the outcomes of patients supported with HeartMate 2 (HM2), HeartWare (HW) and HeartMate 3 (HM3).

Methods: A retrospective analysis of patients who underwent cf-LVAD implantation at our institution between 2008-2017. Follow-up duration was 18 months post implantation.

Results: Included were 105 cf-LVAD-supported patients of whom 51% (n=54), 24% (25) and 25% (26) underwent implantation of HM2, HW and HM3, respectively. Patients supported with HM3 versus HM2 had lower risk of thrombosis (0% vs. 37%, p=0<0.001), while patients supported with HM3 versus HW had lower risk of non-GI bleeding (15% vs. 46%, HR 0.28, CI 0.095, 0.85, p=0.024) and reduced unplanned hospitalizations (median 1 (interquartile range 0, 3) vs. 3 (interquartile range 2, 11), p=0.001). Patients supported with HM3 had a reduced risk of stroke compared with either HM2 or HW (0% vs. 26%, p=0.033 and 0% vs. 42%, p=0.005, respectively). Importantly, survival free from stroke or device exchange was higher in patients with HM3 compared to patients supported with either HM2 or HW (100% vs. 72%, p=0.029 and 100% vs. 56%, p=0.003, respectively) (Figure).

Conclusions: HM3 device presents the best currently available prognostic and adverse events profile when compared to HM2 and HW. We believe that HM3 should be offered as the device of choice for mechanically-supported advanced HF patients
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