ISHLT 2023
43rd ANNUAL MEETING & SCIENTIFIC SESSIONS
Wednesday, 19 April – Saturday, 22 April
Colorado Convention Center | Denver, CO USA
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Session SESSION 06 - Pediatric M.C.S. = Multi-center Collaborative Success!

12. Post-Stage 2 Palliation Single Ventricular Assist Device Outcomes: An Advanced Cardiac Therapies Improving Outcomes Network (Action) Registry Analysis

April 19, 2023, 10:45 AM - 10:55 AM | Rooms 405-407

Topic:
MCS-Pediatrics/Congenital Heart Disease

Presenter
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Disclosures
E.J.Rabinowitz: None. **M.Mehegan:** n/a. **A.Joong:** None. **M.Shezad:** n/a. **E.Griffiths:** None. **M.J.O'connor:** None. **D.Mokshagundam:** Other; ; CareDx. **A.S.Said:** n/a.

Abstract or Presentation Description
Purpose Data regarding ventricular assist devices (VAD) outcomes following stage 2 palliation (S2P) are limited. We aimed to characterize hospitalization outcomes utilizing the multicenter ACTION registry.
Methods We analyzed the ACTION registry for outcomes of all patients implanted after S2P. Reported data included pre-implant characteristics, VAD configuration, post-VAD clinical course, adverse events, survival to transplant/recovery, and post-transplant survival.
Results In total, 34 patients (12 female) from 15 centers were included in the analysis from 2012-2022 with median age and weight of 1.85 years (IQR 0.9-2.7) and 10 kg (IQR 8.1-13.1). Systemic right ventricle was present in 27 (79%) patients. End organ support at time of implant included: inotrope use in 94% (64% on ≥2 agents), mechanical ventilation in 41%, TPN dependency in 35%, ECMO in 21%; no patients were on dialysis. At the time of VAD implant, all but 2 children underwent at least 2 prior sternotomies, and 13 patients had additional procedures including 2 Fontan completions and 1 bidirectional Glenn takedown with Blalock-Thomas-Taussig shunt placement. VAD configurations were equally distributed between paracorporeal pulsatile (45%) and continuous VAD (45%) with 9 patients having utilized both during VAD course. The remaining 10% relied on implantable continuous devices. Median VAD support duration was 30 days (IQR 9-76). Transplant was achieved in 21 patients (62%), of which 20 (95%) survived to discharge and 19 (90%) are alive 1 year post-transplant. Ventricular recovery permitting explantation was seen in 1 (3%) patient and 4 (12%) remain on VAD support at time of this report. Adverse events included infection (74%) of which sepsis comprised 40% of cases, major bleeding (47%), ischemic CVA or TIA (26%), intracranial bleed (6%), device malfunction (18%) and dialysis use (15%). Mortality on device was 21% (n = 7); the most common cause of death being hemorrhage (n = 3).
Conclusion Patients with failed S2P physiology have high illness severity prior to VAD implantation. Although adverse events were common, this strategy was

a viable bridge to heart transplant. The vast majority of those transplanted survived to one-year post-transplant.