Pediatric Heart Transplant Society

What's Pumping in Pediatric Heart Transplant Research?

Summary of the following recently published article from PHTS

Survival After Heart Transplant Listing for Infants on Mechanical Circulatory Support

Jennifer Conway, MD | Ryan Cantor, PhD | Devin Koehl, MSDS | Robert Spicer, MD | Dipankar Gupta, MD | Michael McCulloch , MD | Alfred Asante-Korang, MD | Dean T. Eulrich, PhD | James K. Kirklin, MD | Elfriede Pahl, MD

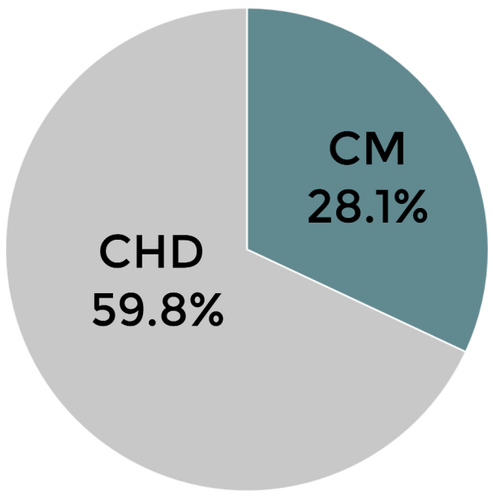
Babies with heart failure are at the highest risk of dying while waiting for transplant, even when supported with a mechanical device such as extra-corporeal membrane oxygenator (ECMO) or ventricular assist device (VAD).



It is not clear if survival is affected by the reason for listing [cardiomyopathy (CM) vs congenital heart disease (CHD)] or the type of mechanical support (ECMO vs. VAD).

2049 patients

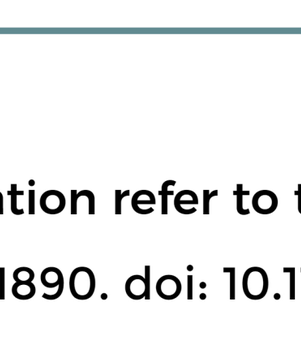
Children <10Kg
listed between 2010-2018



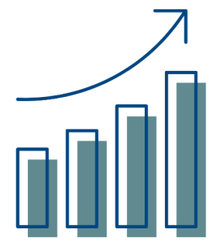
CM: Cardiomyopathy
CHD: Congenital Heart Disease

Pre and Post Heart Transplant

- In CM patients, VAD use was more common.
- No difference in ECMO use.



Outcomes



- Survival pre-transplant on VAD was better than ECMO.
- No difference in pre-transplant survival for infants <5kg between VAD and ECMO
- CM patients on VAD and ECMO had better pre-transplant outcomes than CHD patients.

Summary:

This work highlights that devices specific for smaller children, especially those with CHD, are needed to help support patients to transplant.

For more information refer to the original article:

J Am Heart Assoc. 2020 Nov 3;9(21):e011890. doi: 10.1161/JAHA.118.011890. Epub 2020 Oct 20.