Pediatric Heart Transplant Society

What's Pumping in Pediatric Heart Transplant Research?

Summary of the following recently published article from PHTS

The MELD-XI Score Identifies Fontan Patients Who are at Higher Risk of Death Following Heart Transplant

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This study evaluated if the MELD-XI score* could predict heart transplant outcomes for Fontan patients.

The MELD-XI score allows for simultaneous assessment of liver and kidney function, both of which are typically affected in Fontan patients. A higher score means worse combined liver and kidney function.

*The MELD-XI score is a score that assesses liver and kidney function with the formula below:
MELD-XI= 5.112 x $\log_e$ (total bilirubin) + 11.76 x $\log_e$ (creatinine) + 9.44



Population

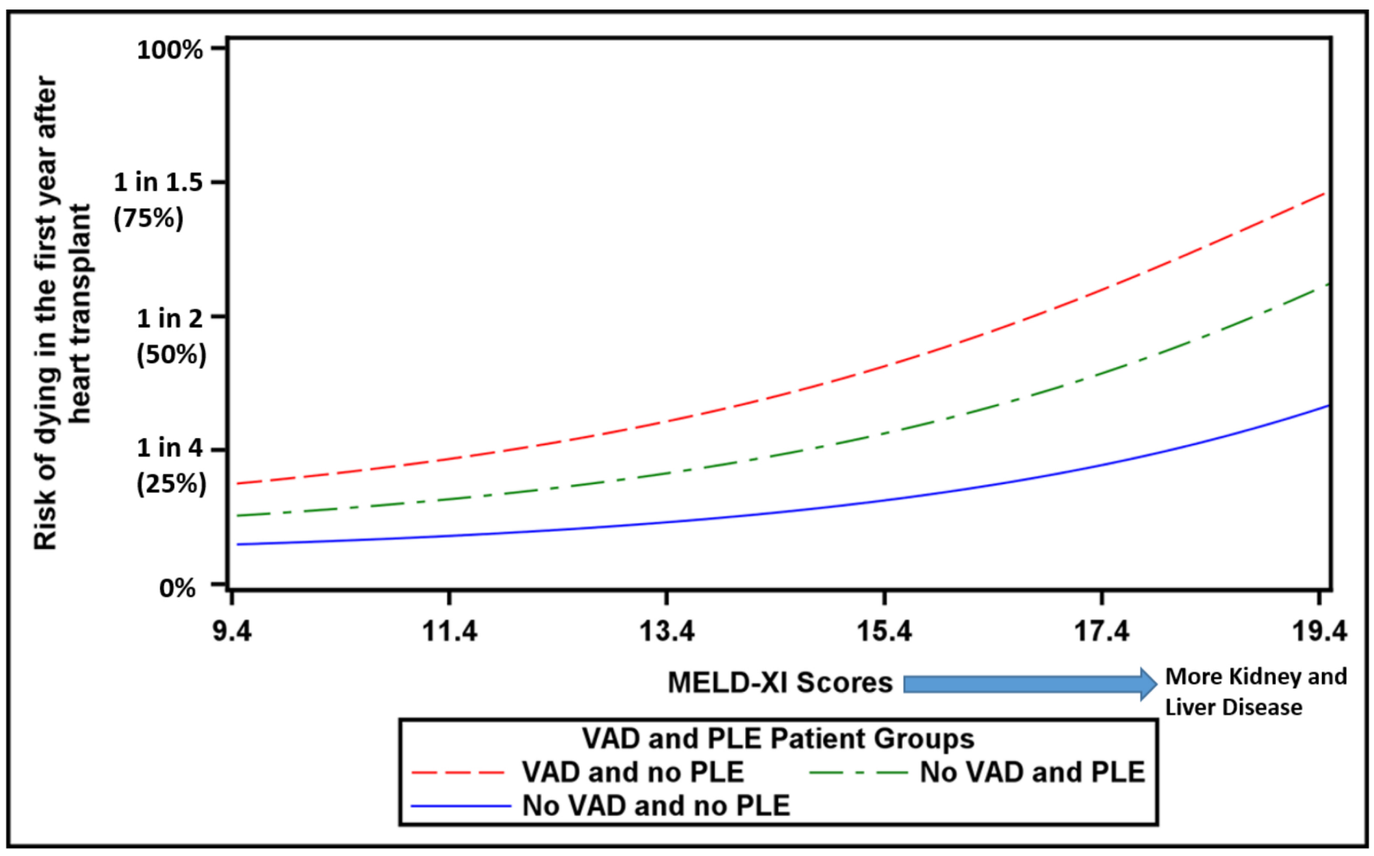
All children with Fontan who were listed for heart tx before age 18.

While Waiting for a Tx

Fontan patients with a high MELD-XI score at transplant listing and transplant operation had an increased need for ventilation, intravenous medications, and/or mechanical support for the heart.



Fontan patients with a high MELD-XI score at the time of tx listing and time of the tx operation have poorer post-heart tx survival.



MELD-XI: Model of End-stage Liver Disease eXcluding INR; **VAD**: Ventricular assist device; **PLE**: Protein losing enteropathy

What was associated with lower survival after transplant in patients with a Fontan?

- High MELD-XI score at tx
- Use of ventricular assist device at tx
- History of protein losing enteropathy

Summary:

Using our model, heart transplant clinicians can estimate survival for Fontan patients following a heart transplant. This can help Fontan patients, families, and medical providers communicate clearly about anticipated survival after heart transplant. Importantly, the results of this study may allow physicians to identify patients who need to be listed for transplantation prior to developing high risk for poor outcomes.

For more information refer to the original article:

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