Editorial

Pediatric heart transplantation: advancing the field into the future

Heart transplantation represents the common final pathway for many children with end-stage heart failure and outcomes continue to improve. While significant advances in the field have been realized over the past four decades, many challenges remain. Waitlist mortality for children awaiting heart transplantation remains unacceptably high and children listed for heart transplantation have the highest risk of death among all solid organ transplant candidates (1,2). This is compounded by a lack of standardized criteria for donor acceptance and the fact that nearly 50% of pediatric donor hearts are discarded (3,4). Increasing use of ventricular assist devices has improved waitlist mortality (5), but few devices are designed specifically for the pediatric population and supporting small patients or those with congenital heart disease remains problematic.

In addition to the challenges associated with supporting pediatric candidates to transplantation, there are areas for improvement in the post-transplant period. Practice patterns vary considerably across centers (3,6-8), indicating a lack of robust scientific evidence to guide clinical management and the evolution of practice based on clinical experience. Given the diverse management strategies prevalent in our field, clinical research aimed at identifying best practices remains a challenge. Overcoming these challenges will require multi-center collaboration and a structured approach to move the field forward. In this focused issue on pediatric heart transplantation, leaders in the field will discuss the challenges specific to heart transplantation in children and outline strategies to continue to improve care for this unique population.

Acknowledgments

None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

References

1. Almond CS, Thiagarajan RR, Piercey GE, et al. Waiting list mortality among children listed for heart transplantation in the United States. Circulation 2009;119:717-27
2. Colvin M, Smith JM, Hadley N, et al. OPTN/SRTR 2017 Annual Data Report: Heart. Am J Transplant 2019;19 Suppl 2:323-403.
3. Godown J, Kirk R, Joong A, et al. Variability in donor selection among pediatric heart transplant providers: Results from an international survey. Pediatr Transplant 2019;23:e13417.
4. Khan AM, Green RS, Lytrivi ID, et al. Donor predictors of allograft utilization for pediatric heart transplantation. Transpl Int 2016;29:1269-75.
5. Zafar F, Castleberry C, Khan MS, et al. Pediatric heart transplant waiting list mortality in the era of ventricular assist devices. J Heart Lung Transplant 2015;34:82-8.
6. Godown J, Harris MT, Burger J, et al. Variation in the use of surveillance endomyocardial biopsy among pediatric heart transplant centers over time. Pediatr Transplant 2015;19:612-7.
7. Godown J, McKane M, Wujcik KA, et al. Regional variation in the use of 1A status exceptions for pediatric heart transplant candidates: is this equitable? Pediatr Transplant 2017;21. doi: 10.1111/petr.12784.
8. Castleberry C, Ziniel S, Almond C, et al. Clinical practice patterns are relatively uniform between pediatric heart transplant centers: A survey-based assessment. Pediatr Transplant 2017;21. doi: 10.1111/petr.13013.

Justin Godown

Shawn C. West

Justin Godown, MD
Pediatric Cardiology, Monroe Carell Jr. Children's Hospital at Vanderbilt, Nashville, TN, USA.
(*Email: justin.godown@vumc.org*)
Shawn C. West, MD, MSC
Pediatric Cardiology, Children's Hospital of Pittsburgh, The University of Pittsburgh Medical Center, Pittsburgh, PA, USA.
(*Email: shawn.west@chp.edu*)
doi: 10.21037/tp.2019.08.05
View this article at: http://dx.doi.org/10.21037/tp.2019.08.05

Cite this article as: Godown J, West SC. Pediatric heart transplantation: advancing the field into the future. Transl Pediatr 2019;8(4):267-268. doi: 10.21037/tp.2019.08.05