Pediatric Transplantation

Respiratory syncytial virus infections in pediatric transplant recipients: A Canadian Paediatric Surveillance Program study

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Keywords: respiratory syncytial virus; solid organ transplant; stem cell transplantation; viral infection

Abstract

The incidence and spectrum of severity of RSV infections in SOT or HSCT recipients is not known. From September 2010 through August 2013, pediatricians were surveyed monthly by the CPSP for SOT or HSCT recipients with RSV infection within two yr post-transplant. There were 24 completed case report forms that fit the inclusion criteria (10 HSCT and 14 SOT recipients). Six of 24 cases (25%) remained outpatients, and 11 (46%) were managed on an inpatient ward, while seven (29%) required intensive care of which five required mechanical ventilation and two died of RSV infection. Ten of 23 cases (43%) were nosocomial with these data not recorded for one case. Many transplant recipients recover uneventfully from RSV infection in the first two yr post-transplant. However, severe disease and death also occur. Larger studies are required to establish risk factors for poor outcomes. Prevention of nosocomial RSV should be a priority in transplant recipients.

Planning for Uncertainty and Fallbacks Can Increase the Number of Transplants in a Kidney-Paired Donation Program

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Abstract

A kidney-paired donation (KPD) pool consists of transplant candidates and their incompatible donors, along with nondirected donors (NDDs). In a match run, exchanges are arranged among pairs in the pool via cycles, as well as chains created from NDDs. A problem of importance is how to arrange cycles and chains to optimize the number of transplants. We outline and examine, through example and by simulation, four schemes for selecting potential matches in a realistic model of a KPD system; proposed schemes take account of probabilities that chosen transplants may not be completed as well as allowing for contingency plans when the optimal solution fails. Using data on candidate/donor pairs and NDDs from the Alliance for Paired Donation, the simulations extend over 8 match runs, with 30 pairs and 1 NDD added between each run. Schemes that incorporate uncertainties and fallbacks into the selection process yield substantially more transplants on average, increasing the number of transplants by as much as 40% compared to a standard selection scheme. The gain depends on the degree of uncertainty in the system. The proposed approaches can be easily implemented and provide substantial advantages over current KPD matching algorithms.

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Right ventricular failure after left ventricular assist devices

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Keywords: left ventricular assist device, right ventricular failure, peri-operative mortality, risk models, RVF predictors

Abstract

Most patients with advanced systolic dysfunction who are assessed for a left ventricular assist device (LVAD) also have some degree of right ventricular (RV) dysfunction. Hence, RV failure (RVF) remains a common complication of LVAD placement. Severe RVF after LVAD implantation is associated with increased peri-operative mortality and length of stay and can lead to coagulopathy, altered drug metabolism, worsening nutritional status, diuretic resistance, and poor quality of life. However, current medical and surgical treatment options for RVF are limited and often result in significant impairments in quality of life. There has been continuing interest in developing risk models for RVF before LVAD implantation. This report reviews the anatomy and physiology of the RV and how it changes in the setting of LVAD support. We will discuss proposed mechanisms and describe biochemical, echocardiographic, and hemodynamic predictors of RVF in LVAD patients. We will describe management strategies for reducing and managing RVF. Finally, we will discuss the increasingly recognized and difficult to manage entity of chronic RVF after LVAD placement and describe opportunities for future research.

http://www.jhltonline.org/article/S1053-2498%2815%2901337-6/abstract
Liver Transplantation

Optimizing informed consent in living liver donors: Evaluation of a comprehension assessment tool.


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Abstract

Adult-to-adult living liver donation is associated with considerable risks with no direct medical benefit to liver donors (LDs). Ensuring that potential LDs comprehend the risks of donation is essential to medically and ethically justify the procedure. We developed and prospectively evaluated the initial psychometrics of an "Evaluation of Donor Informed Consent Tool" (EDICT) designed to assess LDs’ comprehension about the living donation process. EDICT includes 49 true/false/unsure items related to LD informed consent. Consecutive LDs undergoing evaluation at 1 academic medical center from October 2012 to September 2014 were eligible for participation in pretest/posttest interviews. Medical records were reviewed for postdonation complications. Twenty-seven LDs participated (96% participation rate). EDICT demonstrated good internal consistency reliability at pretest, 2 days before donating (Cronbach's α = 0.78), and posttest, 1 week after donating (α = 0.70). EDICT scores significantly increased over time (P = 0.01) and demonstrated good test-retest reliability (r = 0.68; P < 0.001). EDICT was associated with race/ethnicity (P = 0.02) and relationship to the recipient (P = 0.01; pretest), and income (P = 0.01) and insurance (P = 0.01; posttest), but not with decisional conflict, preoperative preparedness, satisfaction, or decisional regret (pretest and posttest). Donor complications did not impact postdonation EDICT scores. In conclusion, EDICT has promising measurement properties and may be useful in the evaluation of informed consent for potential LDs. Liver Transpl 21:1270-1279, 2015. © 2015 AASLD