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Center-Level Experience and Kidney Transplant Outcomes in HIV-Infected Recipients

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Keywords:

clinical research/practice; health services and outcomes research; kidney transplantation/nephrology; infectious disease; infection and infectious agents; viral: human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS); kidney (allograft) function/dysfunction; patient survival; Scientific Registry for Transplant Recipients; (SRTR); graft survival

Abstract:

Excellent outcomes among HIV+ kidney transplant (KT) recipients have been reported by the NIH consortium, but it is unclear if experience with HIV+ KT is required to achieve these outcomes. We studied associations between experience measures and outcomes in 499 HIV+ recipients (SRTR data 2004–2011). Experience measures examined included: (1) center-level participation in the NIH consortium; (2) KT experiential learning curve; and (3) transplant era (2004–2007 vs. 2008–2011). There was no difference in outcomes among centers early in their experience (first 5 HIV+ KT) compared to centers having performed >6 HIV+ KT (GS adjusted hazard ratio [aHR]: 1.05, 95% CI: 0.68–1.61, p = 0.82; PS aHR: 0.93; 95% CI: 0.56–1.53, p = 0.76), and participation in the NIH-study was not associated with any better outcomes (GS aHR: 1.08, 95% CI: 0.71–1.65, p = 0.71; PS aHR: 1.13; 95% CI: 0.68–1.89, p = 0.63). Transplant era was strongly associated with outcomes; HIV+ KTs performed in 2008–2011 had 38% lower risk of graft loss (aHR: 0.62; 95% CI: 0.42–0.92, p = 0.02) and 41% lower risk of death (aHR: 0.59; 95% CI: 0.39–0.90, p = 0.01) than that in 2004–2007. Outcomes after HIV+ KT have improved over time, but center-level experience or consortium participation is not necessary to achieve excellent outcomes, supporting continued expansion of HIV+ KT in the US.

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Tacrolimus to Belatacept Conversion Following Hand Transplantation: A Case Report

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clinical research/practice; vascularized composite and reconstructive transplantation; costimulation; immunosuppressant

Abstract:

Vascularized composite allotransplantation (VCA) has emerged as a viable limb replacement strategy for selected patients with upper limb amputation. However, allograft rejection has been seen in essentially all reported VCA recipients indicating a requirement for substantial immunosuppressive therapy. Calcineurin inhibitors have served as the centerpiece agent in all reported cases, and CNI-associated complications associated with the broad therapeutic effects and side effects of calcineurin inhibitors have been similarly common. Recently, belatacept has been approved as a calcineurin inhibitor replacement in kidney transplantation, but to date, its use in VCA has not been reported. Herein, we report on the case of a hand transplant recipient who developed recurrent acute rejection with alloantibody formation and concomitant calcineurin inhibitor nephrotoxicity, all of which resolved upon conversion from a maintenance regimen of tacrolimus, mycophenolate mofetil and steroids to belatacept and sirolimus. This case indicates that belatacept may be a reasonable maintenance immunosuppressive alternative for use in VCA, providing sufficient prophylaxis from rejection with a reduced side effect profile, the latter being particularly relevant for nonlife threatening conditions typically treated by VCA.

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Successful Semi-Ambulatory Veno-Arterial Extracorporeal Membrane Oxygenation Bridge to Heart–Lung Transplantation in a Very Small Child

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Keywords:

Clinical research; extracorporeal membrane oxygenation (ECMO); lung disease; lung transplantation; pediatrics; practice; pulmonology

Abstract:

Lung transplantation (LTx) may be denied for children on extracorporeal membrane oxygenation (ECMO) due to high risk of cerebral hemorrhage. Rarely has successful LTx been reported in children over 10 years of age receiving awake or ambulatory veno-venous ECMO. LTx following support with ambulatory veno-arterial ECMO (VA ECMO) in children has never been reported to our knowledge. We present the case of a 4-year-old, 12-kg child with heritable pulmonary artery hypertension and refractory right ventricular failure. She was successfully bridged to heart–lung transplantation (HLTx) using ambulatory VA ECMO. Initial resuscitation with standard VA ECMO was converted to an ambulatory circuit using Berlin heart cannulae. She was extubated and ambulating around her bed while on VA ECMO for 40 days. She received an HLTx from an oversized marginal lung donor. Despite a cardiac arrest and Grade 3 primary graft dysfunction, she made a full recovery without neurological deficits. She achieved 104% force expiratory volume in 1 s 33 months post-HLTx. Ambulatory VA ECMO may be a useful strategy to bridge very young children to LTx or HLTx. Patient tailored ECMO cannulation, minimization of hemorrhage, and thrombosis risks while on ECMO contributed to a successful HLTx in our patient.

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Progress in Transplantation

Transition to adult care in pediatric solid-organ transplant: development of a practice guideline

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Background—Transition to adult-centered care is becoming an increasingly important area of practice in pediatric organ transplant. Standardized, best-practice guidelines are needed to assist transplant practitioners in providing optimal transitional care for this population of patients.

Objective—To describe the development and implementation of a practice guideline for the transitional care of pediatric transplant recipients.

Methods—A quality improvement project was undertaken in a pediatric multiorgan transplant program setting. Strategies employed included (1) creation of an interdisciplinary working group, (2) survey of transition-related practices and learning needs of transplant practitioners, (3) review of the literature and existing transition-related materials, and (4) creation of transition guidelines.

Results—An interdisciplinary survey of transplant practitioners at our institution identified practice strengths related to transitional care and learning needs. Review of relevant literature and other materials revealed limited but emerging research related to the transition of pediatric transplant recipients from pediatric to adult care. Existing transition tools were examined and applicable items identified. A practice guideline for use with pediatric transplant recipients transitioning to adult care was developed. Strategies to educate staff about the guideline and promote ongoing guideline use were implemented.

Conclusion—Preparing pediatric transplant recipients and their families for transition to adult-centered care is an emerging challenge for transplant teams. These guidelines provide practitioners with a developmentally sensitive overview of important transition-related domains and strategies directed toward patients and their caregivers, who may experience the process of transition differently. Dissemination of the pediatric transplant transition guideline will make transition information more widely available to transplant practitioners.

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