
FRONTIERS IN ORGAN FAILURE AND TRANSPLANT MANAGEMENT

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Heart, kidney, and respiratory failure account for significant morbidity and mortality in the world. Solid organ replacement by transplantation and assistance with mechanical devices for those with heart failure are, for many patients, the only options to treat these devastating diseases. Since its inception, Houston Methodist Hospital's J.C. Walter Jr. Transplant Center has been on the forefront of investigating the underlying mechanisms that regulate disease and developing new strategies in end-organ failure. As one of the leading solid organ transplant centers in the world and the largest in Texas, the Houston Methodist J.C. Walter Jr. Transplant Center brings together an unparalleled concentration of expertise in the field. This supplement of the *Methodist DeBakey Cardiovascular Journal* harnesses that expertise to present topics covering a broad spectrum of disease. Our goal is to provide health care professionals with the platform they need to care for these enormously complex patients, many of whom suffer from multiorgan failure.

Each year, the center's Wade Suki and George Noon transplant conference permits us to share a wealth of knowledge across disciplines, fostering collaboration among national and international experts. A highlight of our conference is to recognize two transplant giants—one in the field of nephrology, Dr. Wadi Suki, and the other, Dr. George P. Noon, whose well-known surgical career has focused exclusively on organ transplantation and cardiac assist devices. In this supplement, we provide highlights from our most recent conference addressing frontiers in organ failure and transplant management. We open with a review by Drs. Barry Freedman and Todd Robinson discussing the important relationships between the apolipoprotein L1 renal-risk variants and the disparate risk and protective observations in cardiovascular disease related to this gene. Cardiac and renal relationships are further explored in a review that focuses on phosphorus regulation. Here, Dr. Suki and dietician Linda Moore cite the observations linking higher serum phos-

phorus with increased adverse events and cardiovascular-related mortality in people with and without chronic kidney disease.

Pulmonary hypertension is another topic of interest with regard to organ transplantation. Dr. Adaani Frost reviews how pulmonary hypertension contributes to patient symptoms and increases morbidity and mortality in patients with end-stage renal, heart, liver, and lung disease. Importantly, a complementary abstract by Dr. Myung Park focuses on the detection and management of left heart disease in the setting of pulmonary hypertension, which portends a worse prognosis in these patients.

Critical to all end-organ evaluations is the psychosocial assessment, which is outlined in an abstract by Dr. Inna D'Empaire. In addition, an abstract by Dr. Timothy Connolly discusses lung volume reduction coils that limit airway collapse and hyperinflation in patients with respiratory failure. Finally, Dr. Neeraj Sinha explains the important role of common bronchoscopic interventions in improving pre- and posttransplant morbidity and mortality in lung transplant recipients and how these interventions can be used in nontransplant indications. The conference also included a presentation by Dr. Jerry Estep on temporary percutaneous mechanical circulatory support in advanced heart failure, a review of which can be found in the journal *Heart Failure Clinics*.¹

A goal of our conference is to highlight the rich history of solid organ transplantation and mechanical circulatory support at the Houston Methodist J.C. Walter Jr. Transplant Center and to provide a multidisciplinary perspective on the most challenging topics in end-organ failure. It is our hope that readers enjoy and learn from this journal supplement and continue to explore and expand the possibilities in organ transplantation.

Reference

1. Brown JL, Estep JD. Temporary percutaneous mechanical circulatory support in advanced heart failure. *Heart Failure Clin*. 2016 Jul;12(3):385-98.