pro-thrombotic by inducing tissue factor, the main trigger of coagulation and hereby involvement in arterial thrombus formation.

Summary: In conclusion, dissimulated amphetamine abuse might be a rare cause of recurrent LVAD pump thrombosis especially in young men. In view of otherwise unexplainable recurrent pump thrombosis, a drug screening test should be considered in young patients at an early stage especially in high risk regions for amphetamine consumption.

A Case of Reversible Pulmonary Hypertension: Culprit in the Kidney

Introduction: Large left to right shunts are correctable causes of pulmonary arterial hypertension (PH). We present an unusual case of severe pre-capillary PH due to a giant renal arteriovenous fistula (AVF).

Case Report: A 74-year-old woman with history of atrial fibrillation, hypertension and right ureteral surgery for recurrent urinary tract infections developed progressive abdominal distention, edema, and shortness of breath leading to hospitalization. Transthoracic echocardiography (TTE) showed severe right ventricular (RV) dysfunction, tricuspid annular plane systolic excursion of 10 mm, estimated pulmonary artery systolic pressure (PASP) of 70 mmHg, severely dilated inferior vena cava (5 cm), and normal left ventricular (LV) function. Right heart catheterization revealed right atrial pressure of 23 mmHg, pulmonary artery pressure (PAP) of 80/30 mmHg, wedge pressure of 15 mmHg, cardiac index of 3.4 L/min/m², and pulmonary vascular resistance of 5.6 WU. There was no intracardiac shunt, liver disease, anemia, chronic thromboembolic disease, or parenchymal lung disease. Due to the history of ureteral surgery and finding of elevated cardiac index, a right upper quadrant ultrasound was performed, which showed a large AVF in the right kidney. Magnetic resonance angiography confirmed the finding of a 10 x 6 cm renal AVF (Figure). A 22 mm Amplatzer Vascular closure device was successfully deployed in the inflow segment of the AVF. Post-intervention, PAP decreased to 66/15 mmHg. Systemic vascular resistance (SVR) increased from 587 to 1522 dyn·s·cm⁻⁵. LVEF by TTE on the following day was 25%, presumably due to the abrupt increase in SVR. TTE performed 21 days post-intervention showed normal LV and RV size and function with PASP of 25-30 mmHg, and the patient was NYHA class I.

Summary: Extracardiac shunts leading to PH are uncommon. Endovascular occlusion of the AVF is a minimally invasive and potentially curative procedure. In the presence of PH with increased cardiac output, extracardiac shunts should be considered in the differential.

Recipient-Donor Height Ratio and Outcomes in Pediatric Heart Transplantation

Purpose: Height matching in pediatric heart transplantation has been proposed as a better method of evaluating graft size compared to weight matching; however, no studies have shown a survival advantage for height-matched recipient-donor pairs. We hypothesized that pediatric patients with dilated cardiomyopathy (DCM) fare better with an oversized donor and aimed to define the optimal height ratio in this group of patients.

Methods: All pediatric primary heart transplant (HTx) recipients with DCM between 10/89 and 09/12 were identified in the OPTN database. Subjects were stratified into five recipient:donor height and weight ratio categories between 10/89 and 09/12 were identified in the OPTN database. Subjects were stratified into five recipient:donor height and weight ratio categories

Results: 2234 children with DCM underwent HTx during the study period. 1-year survival was worse for those recipients with a height ratio greater than 1.15, compared to those with less than a 5% difference in height [unadjusted p=0.01, HR 2.0 (95% CI 1.17-3.43)] (fig 1a). This difference was not present at 5-years post-HTx (p=0.60). When stratified by weight, no survival difference was found at one or five years post-HTx (p=0.28 and 0.40, respectively) (fig 1b).

Conclusion: Pediatric HTx recipients with DCM have worse short-term survival when they are > 15% taller than their donors compared to well-matched recipients, however this difference does not persist at five years.
Recipient: donor height ratio matching can predict early mortality better than weight ratio matching in the U.S. pediatric DCM cohort.

**33 Donor to Recipient Age Difference in Weight-Matched Pediatric Heart Transplants Predicts Mortality**

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**Purpose:** Donors are matched on weight for pediatric heart transplant (PHT), however, age differences are not considered in this decision. This study attempts to identify age differences in weight matched PHT and its effect on post-transplant survival.

**Methods:** United Network of Organ Sharing (UNOS) database from October 1987 - March 2014 was queried for all PHT. Transplants with donor-to-recipient weight ratio of 0.8-1.5 were identified (weight matched). Donor to recipient age differences were categorized into, donors 5 yr younger, donors 5 yr older than recipients.

**Results:** A total of 4408 PHT were identified as weight matched transplants. Donor to recipient age difference was present in 70% (3067) of the cohort, with median age difference of 1 yr [-13 - 45]. Transplants with donors 5 yr older than recipients are associated with decreased post-transplant survival compared to donors within 5yr of recipient age (p=0.002). Increasing age difference by each year was associated with decreasing median post-transplant survival time (p<0.001; 1.018 (1.011-1.025)). In a multivariate cox-regression model increasing donor to recipient age difference was associated with mortality (p=0.001; 1.015 (1.008-1.023)), regardless of all known predictors of PHT mortality.

**Conclusion:** In PHT, an increasing donor to recipient age difference decreases survival. Careful consideration must be given when selecting a donor older than the recipient, especially when the difference exceeds 5 years.

**34 The Impact of Ischemic Time on Early Rejection After Pediatric Heart Transplant**

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**Purpose:** Prolonged graft ischemia is thought to be a risk factor for early rejection post-heart transplant (HTx), but this phenomenon has not been well studied in a pediatric population. Furthermore, factors that may moderate the association between ischemic time (IT) and early rejection have not been investigated.

**Methods:** From 2004-2012, pediatric HTx recipients (n=2381) were identified from the United Network for Organ Sharing database. A receiver operating characteristic curve determined the optimal IT discriminating patients by the presence of early rejection. Separate univariate analyses were performed to determine characteristics associated with 1) early rejection and 2) IT. A multivariable logistic regression assessed independent risk factors for early rejection. We specifically included interaction terms that evaluated whether IT’s independent effect on the risk of early rejection is moderated (either enhanced or diminished) via interaction with its associated factors found on univariate analysis.

**Results:** An IT of 3.1 hours optimally discriminated patients with and without early rejection. Factors associated with early rejection in univariate analysis were age > 1 year (p<.0001), Caucasian race (p=.1), congenital heart disease (p=.04), status 2 at HTx (p=.003), ventricular assist device (VAD) support at HTx (p=.01), PRA level >10% (p<.0001) and IT >3.1 hours (p=.001). Factors associated with prolonged IT were recipient age <2 years (p=.02), congenital heart disease (p<.0001), VAD (p=.08), dialysis (p=.001), PRA >10% (p=.004), donor age <1 year (p=.01). In the multivariable analysis, IT >3.1 hours was an independent risk factor for early rejection (adjusted odds ratio 1.44, 95% confidence interval 1.10-1.88; p=.01). No interaction term between IT and any of its associated factors was significant i.e. IT’s risk was not moderated by any interaction with other factors. The analysis was replicated using the cohort’s median IT of 3.5 hours and found no notable differences in results.

**Conclusion:** Duration of IT is an independent risk factor for early rejection in pediatric HTx recipients. No other risk factors for rejection moderate the risk conferred by IT. Further characterization of the mechanism by which increasing IT causes early rejection may identify interventions to mitigate this risk.

**35 High BMI Predicts Poor Outcomes in DCM But Not CHD Patients: The Differential Impact of Obesity on Outcomes in Pediatric Heart Transplantation**

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