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Heart Failure and Cardiomyopathies

UTILIZATION OF HEMODYNAMIC SUPPORT IN STATUS 1A PATIENTS AWAITING HEART TRANSPLANT: INSIGHT FROM UNITED NETWORK OF ORGAN SHARING (UNOS)

Poster Contributions

Poster Hall B1

Saturday, March 14, 2015, 10:00 a.m.-10:45 a.m.

Session Title: Stage D and Beyond: Advanced Heart Failure, Mechanical Circulatory Support and Transplantation

Abstract Category: 15. Heart Failure and Cardiomyopathies: Therapy

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Authors: *Sachin Kumar, Sadeer Al-Kindi, Mobolaji Ige, Chantal Elamm, Mahazarin Ginwalla, Guilherme Oliveira, University Hospitals Case Medical Center, Cleveland, OH, USA*

Background: Hemodynamic support is crucial in status 1A patients. There is paucity of literature regarding the variation in the utilization rates of hemodynamic support in pre-transplant population.

Methods: We examined UNOS database for all patients (age ≥ 18 years) who received heart transplantation with status 1A between 1999 and 2013. We analyzed the variation in utilization of hemodynamic support with inotropes, intraaortic balloon pumps (IABP), extracorporeal membrane oxygenation (ECMO), left ventricular assist devices (VADs) and its impact on post-transplant survival.

Results: We identified 13,988 patients, mean age 50.8 years, predominantly Caucasian (70.4%) males (77.8%). 1.1% patients required ECMO, 11.0% IABP, 36.8% LVAD, and 46.5% inotropes. IABP use declined, 16.1% in 1999 to 8.4% in 2013, $p < 0.001$; ECMO use increased from 0.5% (1999) to 1.2% (2012), $p = 0.029$; LVAD use increased from 32.3% (2004) to 49.4% (2013), $p < 0.001$; and inotrope use decreased from 66.1% (1999) to 34.8% (2013), $p < 0.001$. 6,935 patients had post transplant survival data. Multivariate analysis revealed worse outcome associated with ECMO (Odds ratio [OR] 0.30, $p < 0.001$), VADs (OR 0.87, $p = 0.016$), and IABP (OR: 0.84, $p = 0.035$) but not inotropes (OR 0.99, $p = 0.83$).

Conclusion: Utilization rates have favored VADs, with a sharp decline in the use of IABPs, and inotropes as pretransplant hemodynamic support strategy. All strategies except inotropes are associated with adverse survival outcomes

