

Abstract No. **22**

Category: **Heart Failure and Cardiomyopathies**

Title: **Outcomes with Veno-Arterial Extra Corporeal Life Support pre and post cardiac transplant in an IV Level Care Center in Bogota**

Primary Author: **Victor Nieto**

**Abstract:**

**Background:** To describe the clinical outcomes related to VA (Veno-Arterial) ECLS (Extra Corporeal Life Support) therapy in patients as a bridge to heart transplantation and in patients with Acute Graft Dysfunction.

**Methods:** We describe a series of patients retrospectively treated for refractory heart failure who underwent elective or emergency cardiac transplantation in the presence of inotropic support or mechanical circulatory support. The outcomes of VA ECLS patients were analyzed as a bridge to transplantation and as rescue therapy in the immediate post-transplant period due to acute graft dysfunction.

**Results:** Between 2012 and 2019, 28 patients were treated in a Cardiovascular ICU with the objective of heart transplantation, with an average LVEF of 17.3 % +/- 5.4 %, 71.4 % of the male gender and an average age of 51.2 +/- 12.4. 46.4% with dyslipidemia and 32.1% with chronic renal insufficiency. The most frequent cause of heart failure was ischemic with 42.9% followed by chagasic with 21.4%. 75% were in intermacs III and IV and 25% in intermacs I. The cold ischemia time for the transplant was 217.5 minutes on average and 129 minutes for extracorporeal circulation. 5 patients (17.9%) received pretransplant ECLS and 4 (14.3%) biventricular assistance (BVA) with Centrimag. 4 (14.3%) patients received post-transplant ECLS due to acute graft dysfunction. Global ICU survival was 82.1% and 64.3% to a year. The group on ECLS had a mortality of 20% (1 patient) compared to no deaths in the BVA group. Survival in patients with post-transplant ECLS was 50%. The factors related to mortality were severe right ventricular dysfunction OR: 1.4 (95% CI 1.05 - 2.075) and persistent hyperlactatemia OR: 1.3 (95% CI 1.03 - 1.7). Mechanical circulatory assistance was not a factor related to mortality.

**Conclusion:** ECLS as a bridge to transplant and as a rescue of acute graft dysfunction had significant survival, although the mortality of pre-transplant ECLS was superior compared to the pre-transplant BVA group. Circulatory support was not related to mortality, the risk factors related to death in the ICU were persistent hyperlactatemia and severe right ventricular dysfunction of the graft.