VENO-ARTERIAL EXTRACORPOREAL MEMBRANE OXYGENATION AS A BRIDGE TO RIGHT VENTRICULAR RECOVERY FOLLOWING FAILURE OF RIGHT VENTRICULAR ASSIST DEVICE IN RIGHT VENTRICULAR FAILURE ACCOMPANYING PULMONARY EMBOLECTOMY

Poster Contributions
Poster Hall B1
Saturday, March 14, 2015, 3:45 p.m.-4:30 p.m.

Session Title: FIT Clinical Decision Making: Structural Heart Disease and Pulmonary Hypertension
Abstract Category: Pulmonary Hypertension and Pulmonary Thrombo-embolic Disease
Presentation Number: 1142-153

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Background: Extracorporeal membrane oxygenation (ECMO) has been used as a bridge to thrombolysis and embolectomy in massive pulmonary embolism. The role of right ventricle assist device (RVAD) and appropriate utility of ECMO in right ventricular (RV) failure during pulmonary embolectomy is not well described.

Case: 43 year-old male presented with a large saddle pulmonary embolus and a clot in the right atrium extending into the left atrium through patent foramen ovale (PFO). RV was severely dilated with left ventricle (LV) ejection fraction of 40%. Patient was hemodynamically stable initially but developed hypoxemia and hypotension within 24 hours.

Decision Making: During surgical embolectomy and PFO repair, function of both ventricles was found to be severely depressed. An intra-aortic balloon pump improved LV function. Milrinone was infused but there was difficulty weaning cardiopulmonary bypass due to poor RV function. Despite placement of Tandem Heart RVAD, he developed severe hypoxic respiratory failure. Veno-arterial ECMO was instituted following which oxygenation improved significantly. In nine days, ECMO and RVAD were successfully explanted as patient continued to recover.

Conclusion: Efficacy of RVAD in RV recovery during pulmonary embolectomy is unknown. Veno-arterial ECMO may be useful as a bridge to RV recovery and oxygenation in post-embolectomy patients with profound cardio-respiratory failure. Rapid intra-operative decision-making and multidisciplinary approach is a crucial part of this intervention.