Abstract Title: Trends in the use Of VA-ECMO in the management of Post Infarction Ventricular Septal Defect

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Background:

 Myocardial infarction resulting in post infarction ventricular septal defect (PIVSD) is a catastrophic event which can result in high mortality rates of>90% if untreated. This complication can be particularly devastating in the setting of cardiogenic shock, which can affect definitive surgical or transcatheter treatment of the condition. Veno-Arterial Extra-Corporeal Membrane Oxygenation (VA ECMO) is a form of mechanical circulatory support that can be used to support such patients and guide decisions on definitive therapy. Our study aimed to assess the role of VA-ECMO in management of patients with PIVSD.

Methods:

Data in the form of ELSO variables was requested from the Extra Corporeal Life Support Organization (ELSO) registry. The study period was from year 2000 to 2018. Inclusion criteria were a diagnosis of Ventricular septal defect as current complication following acute myocardial infarction, VA ECMO, and age 18-100. Exclusion criteria were VV ECMO, Age less than 18 years old, and Non-VSD.

Results:

189 patients met study criteria. 28%(n=53) patients were female, and the median age was 63 years. In terms of race, 72%(n=136) were white,8% (n=16) were Asian, 6% (n=12) were Hispanic and 2% (n=4) were Black. 30% patients (n= 57) were reported to be alive at discharge. The median ECMO duration was 136 hours. ECMO type was peripheral in 78% patients and Central in 20% patients.

Conclusion:

VA-ECMO can be used to support patients with Post Infarction Ventricular Septal Defect. This condition has a high mortality rate with 30% survival noted in our study. There was poor representation of females and racial minorities in the study population.