

outcomes rests on identifying patients likely to derive survival advantages from this resource-intensive treatment, especially in nascent programs. Therefore, we aimed to describe patient characteristics and clinical outcomes in a single-center experience in the Middle East. **Methods:** Patients who received VA-ECMO support (12/2016 to 01/2023) at a quaternary care center in the Middle East were retrospectively identified using electronic health records. Baseline characteristics, use of vasopressors, invasive hemodynamic monitoring, systemic complications, and clinical outcomes were compared between survivors vs. non-survivors at hospital discharge using appropriate testing. Outcomes of interest included successful weaning, need for 2nd ECMO run during index admission, use of advanced heart failure therapies, in-hospital stroke, bleeding, or death. **Results:** A total of 110 unique patients received VA-ECMO support (49.4 ± 15.3 years, 67.3% males). The most common indications for initiation of ECMO were advanced heart failure (30.9%), post-cardiotomy (23.6%), and post-cardiac arrest (20.0%). A multidisciplinary heart failure team was involved in VA-ECMO initiation/ weaning and active management of vasoactive medications in 59 (53.6%) of the patients. Although 51.4% of the patients were successfully weaned off ECMO and 5.5% were bridged to advanced therapies, only 31.8% overall survived to hospital discharge, and 10.0% required a second run of VA-ECMO support. Post-ECMO complications were common, with 41.1% incidence of sepsis, 43.5% bleeding and 18.7% stroke. Compared to non-survivors, the survivors were younger, had lower BMI, and were less likely to have diabetes and hypertension (Table). **Conclusion:** In hospitalized patients requiring VA-ECMO support, risk of in-hospital mortality and morbidity remains high. Identifying patient characteristics associated with survival and expanding involvement of 'shock teams' in care of these patients will likely improve patient selection and outcomes in this challenging population.

Table. Clinical characteristics, management patterns and in-hospital outcomes after VA-ECMO initiation in survivors vs. non-survivors to discharge.

	All (n=110)	Survivors (n=35)	Non-Survivors (n=75)	P-value
Patient Characteristics				
Age, Years, mean $\pm$ SD	49.4 $\pm$ 15.3	44.4 $\pm$ 16.2	51.8 $\pm$ 14.5	0.02
Males (%)	74 (67.3%)	22 (62.9%)	52 (69.3%)	0.5
BMI, kg/m ² , mean $\pm$ SD	27.6 $\pm$ 9.2	25.0 $\pm$ 6.8	28.9 $\pm$ 10.0	0.04
Coronary Artery Disease (%)	61 (55.5%)	16 (45.7%)	45 (60.0%)	0.2
History of CABG (%)	14 (12.7%)	4 (11.4%)	10 (13.3%)	0.8
History of PCI (%)	38 (34.6%)	10 (28.6%)	29 (37.3%)	0.4
Cardiomyopathy (%)	58 (52.7%)	22 (62.9%)	36 (48.0%)	0.1
History of Smoking (%)	32 (29.1%)	11 (31.4%)	21 (28.0%)	0.7
History of Stroke (%)	6 (5.5%)	2 (5.7%)	4 (5.3%)	0.9
Hypertension (%)	59 (53.6%)	14 (40.0%)	45 (60.0%)	0.05
Hyperlipidemia (%)	56 (50.9%)	14 (40.0%)	42 (56.0%)	0.1
Diabetes (%)	57 (51.8%)	14 (40.0%)	43 (57.3%)	0.09
Chronic kidney disease (%)	21 (19.1%)	6 (17.1%)	15 (20.0%)	0.7
eGFR (ml/min/1.73 ²)	40.1 $\pm$ 16.7	39.8 $\pm$ 17	40.2 $\pm$ 16.7	1
COPD (%)	2 (1.8%)	0	2 (2.7%)	0.3
Atrial Fibrillation (%)	21 (19.1%)	6 (17.1%)	15 (20.0%)	0.7
LVEF %, median [IQR]	21 [15-32]	20 [14-35]	23 [16-45]	0.3
Lactate mg/dL, median [IQR]	5.6 [2.6-10.2]	5.2 [3.6-12.0]	5.7 [2.4-9.8]	0.8
NT-Pro BNP pg/mL, median [IQR]	8014 [1983-15320]	7791 [3314-42964]	8213 [1505-13245]	0.4
HF Service Involvement (%)	59 (53.6%)	20 (57.1%)	39 (52.0%)	0.6
Indication (%)				
ACS complicated by cardiogenic shock	20 (18.2%)	4 (11.4%)	16 (21.3%)	0.6
Acute decompensated heart failure	34 (30.9%)	14 (40.0%)	20 (26.7%)	
Post PCI	5 (4.6%)	2 (5.7%)	3 (4.0%)	
Malignant arrhythmia	1 (0.9%)	0	1 (1.3%)	
Post cardiac arrest	22 (20.0%)	8 (22.9%)	14 (18.7%)	
Post-cardiotomy	26 (23.6%)	7 (20.0%)	19 (25.3%)	0.3
others	2 (1.8%)	0	2 (2.7%)	
Duration on ECMO, days, median [IQR]	7 [5-11]	6 [4-10]	7 [5-11]	0.3
Duration in hospital, days, median [IQR]	25 [12-49]	44 [24-69]	19 [9-36]	<0.0001
ECMO outcomes (%)				
Decannulation	56 (51.4%)	31 (88.6%)	25 (33.8%)	<0.0001
LVAD	4 (3.7%)	2 (5.7%)	2 (2.7%)	
Transplant	2 (1.8%)	2 (5.7%)	0	
Progressive deterioration	47 (43.1%)	-	47 (63.5%)	
Complications (%)				
Stroke	20 (18.7%)	8 (24.2%)	12 (16.2%)	0.3
Sepsis	44 (41.1%)	9 (27.3%)	35 (47.3%)	0.05
Thrombocytopenia	79 (73.2%)	22 (66.7%)	57 (76.0%)	0.3
Bleeding requiring transfusion	47 (43.5%)	12 (36.4%)	35 (48.8%)	0.3
Need for long term dialysis	20 (18.5%)	3 (9.1%)	17 (22.7%)	0.09

IQR: Inter-quartile range

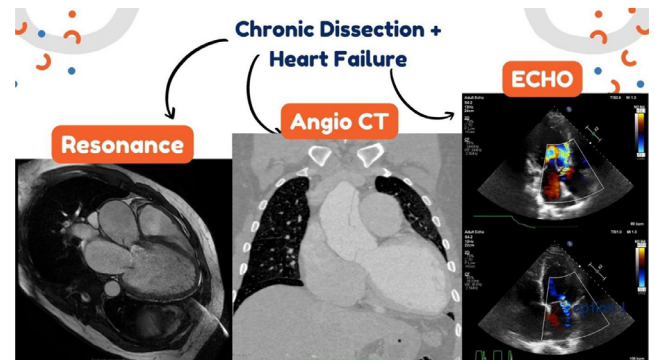
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Chronic Dissection Of The Ascending Aorta Leading To Heart Failure

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Introduction: Chronic aortic dissection is defined when it occurs after 2 weeks of rupture. In patients with a diameter greater than 55mm or presence of aortic insufficiency, surgical intervention has a class I recommendation with level of evidence C. Aortic valve dysfunction can lead to ventricular overload and systolic dysfunction. Such aggression increases perioperative mortality. **Case report:** Male, 49 year-old, with an

unconfirmed history of myocardial infarction in 2011, hypertension, former smoker, cannabis user, was transferred to be evaluated by the heart failure team mid 2022 due to severe systolic dysfunction. Echocardiogram identified enlargement of the four chambers, biventricular dysfunction with ejection fraction by Simpson of 29%, severe aortic regurgitation (AR) and mitral regurgitation (MR), moderate tricuspid regurgitation with estimated pulmonary arterial systolic pressure of 60 mmHg, and dissection of the ascending aorta. Coronary angiogram was normal. Aorta angiogram observed dissection beginning in the aortic root 1.0 cm above the aortic valve and extending to the aortic arch right after the brachiocephalic trunk, and dilatation of this segment with a maximum caliber of 5.5 cm in mid ascending aorta. Cardiac magnetic resonance evidenced diffuse hypokinesia of the left ventricle (LV) with moderate dysfunction and delayed myocardial enhancement in the interventricular septum, and moderate right ventricle (RV) dysfunction. Patient had clear indication for heart surgery but high risk (Euroscore II of 20%), and a cardiopulmonary stress test was performed and it showed a maximal oxygen uptake of 11.8 ml/kg/min but with a slope of 26.9. Considering the patient was young and had high risk with or without surgery, the heart failure team together with the aorta team decided to undergo with the operation preparing for the need for ventricular assist device at the weaning of cardiopulmonary bypass. Surgery was performed with replacement of the ascending aorta, aortic valve plasty and replacement of the mitral valve with a mechanical prosthesis, and the patient had no major post-operative complications being discharged one month after the surgery. **Conclusion:** Dissection of the ascending aorta has a high risk of mortality having indication for emergency surgery. This case shows a patient with probably ten years of aortic dissection evolving with AR possibly because of the dissection, which led to dilation and dysfunction of the LV, which in turn led to severe MR, pulmonary arterial hypertension and RV dysfunction.



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Weight Loss Management By A Pharmacist To Overcome Obesity As A Barrier To Surgical Advanced Heart Failure Interventions

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Introduction: The prevalence of obesity has risen significantly in the United States since 2000, from 30.5% to 41.9% with a rise in severe obesity as well. Patients with obesity struggle with a variety of comorbid conditions including heart disease. Unfortunately, obesity places candidates for advanced heart failure (AHF) therapies at higher risk for complications and post intervention mortality. AACE/ACE guidelines recommend weight loss of 2.5% within the first month with a goal of 5-10% by 6 months for patients with obesity. A pharmacist telehealth clinic at the Baptist Memorial Hospital Memphis Heart Transplant and MCS Center expanded services in Fall 2022 to include weight management for advanced heart failure patients for whom being overweight or obese was a barrier to AHF intervention candidacy. Utilizing a collaborative practice agreement, pharmacists conducted visits via phone and video to optimize medications and provide diet and lifestyle intervention education. **Hypothesis:** Utilization of a pharmacist for weight management will result in reaching 2.5% weight loss in one month and the goal of 5-10% sooner than six months post referral. **Methods:** Retrospective chart review of patients followed for pharmacist weight management from May 2021 to March 2023 was conducted. Patients must have participated in the telehealth service for >3 months. Data collected included initial weight and BMI and follow up measurements at one, three, and six months post referral. Change in BMI as well as percentage weight loss were calculated at each interval. Pharmacotherapy options utilized was also captured, as well as reaching BMI <35