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Congestive Heart Failure in Persons Living With HIV: Are we providing standard of care?

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BACKGROUND

- With the advent of antiretroviral therapy, Human Immunodeficiency Virus (HIV) infection has become a life-long chronic condition.
- Persons Living with HIV (PLWH) have increased risk of cardiovascular diseases including congestive heart failure (CHF) and increased morbidity and mortality from these diseases due to factors such as HIV-induced chronic inflammation, or the effects of antiretroviral therapy themselves.
- This study will assess if providers at University Hospital in Newark, NJ are providing standard of care for CHF in this patient population.

METHODS

- This study was approved by Rutgers IRB (Pro2020000391).
- The data for this study was collected retrospectively, through review of the medical record for University Hospital.
- A database of 154 charts including all patients with diagnoses of both HIV and CHF was generated using ICD-10 codes for HIV and CHF.
- After screening, 79 patient charts were eligible. Patients were excluded if their CHF was managed elsewhere, if they were misdiagnosed or deceased.
- Nine were diagnosed with heart failure with preserved ejection fraction (HFpEF) defined as an ejection fraction above 50%.
- Seventy were diagnosed with heart failure with reduced ejection fraction (HFrEF) defined as an ejection fraction below 40%.
- Treatment was assessed using the 2017 American College of Cardiology (ACC)/American Heart Association (AHA) guidelines. The variables used to assess our patients based on the AHA guidelines and their evidence rating are outlined in Figure 1 and Figure 2 for HFrEF and HFpEF, respectively.

FIGURES

ACC/AHA Guideline	Evidence Rating
Aldosterone antagonists and beta blockers should be used to decrease mortality in patients with symptomatic heart failure	A
Consider referral for device therapy (implantable cardioverter-defibrillators and cardiac resynchronization therapy) for patients with reduced ejection fraction (<35%) and symptomatic heart failure	A
Patient being provided appropriate pharmacologic treatment based on NYHA/ACC/AHA class of heart failure	A
Patients with HFrEF and hypertension should be prescribed GDMT titrated to attain systolic blood pressure less than 130 mm Hg	C

Figure 1:
ACC/AHA Recommendations for treatment of HFrEF

ACC/AHA Guideline	Evidence Rating
Prescribed diuretics, if patient demonstrates signs and symptoms of volume overload	B
Exercise counseling done or physical therapy referral	B
Patients with hypertension should be treated with evidence-based hypertension treatment guidelines	C

Figure 2:
ACC/AHA Recommendations for treatment of HFpEF

ACC/AHA Guideline	# Abstracted	# Done	Proportion Done	95% CI
Prescribed aldosterone antagonist & beta blockers	60	51	0.85	0.74 - 0.92
Considered for device therapy	37	23	0.62	0.46 - 0.76
Appropriate pharmacologic treatment based on NYHA/ACC/AHA Class	70	57	0.81	0.71 - 0.89
Hypertension prescribed GDMT titrated to attain systolic blood pressure less than 130 mmHg	49	32	0.65	0.51 - 0.77

Figure 3:
Results for HFrEF

ACC/AHA Guideline	# Abstracted	# Done	Proportion Done	95% CI
Prescribed diuretics, if indicated	5	5	1	0.57 - 1.00
Exercise counseling or PT referral	9	6	0.67	0.35 - 0.88
Hypertension treated based on guidelines	7	4	0.57	0.25 - 0.84

Figure 3:
Results for HFpEF

RESULTS

- For patients with HFrEF, 10% of eligible patients were not prescribed aldosterone antagonists due to an incorrect contraindication.
- Thirty eight percent of patients requiring consideration for device therapy were not considered.
- Fourteen percent of patients did not have NYHA/ACC/AHA class documented.
- Three additional charts were found to not follow class-based management.
- Thirty five percent of patients with hypertension did not have guideline-based titrated therapy.
- In terms of HFpEF, 43% of patients did not have proper hypertension treatment.

CONCLUSIONS

- Our study shows that most PLWH were appropriately provided standard of care based on evidence-based guidelines.
- Adherence to these guidelines for CHF in PLWH is important due to their increased risk of mortality and morbidity.
- Improvements such as documentation of heart failure class, contraindications to medications, and consideration for devices may improve outcomes going forward.