

Background

- Heart Failure (HF) is a cardiac dysfunction in which the heart cannot meet the body's metabolic demands.
- Affects 5.7 million Americans.
- 550,000 new cases annually.
- 50% of HF pts dies within 5 years
- Costs about \$30.7 billion yearly.

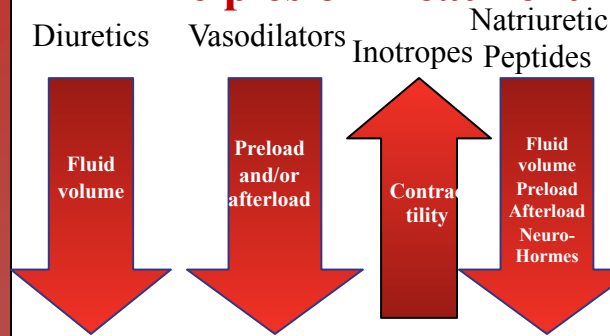
New York Heart Association Functional Classification

- Class I: No limitations.
- Class II: Slight limitations.
- Class III: Marked limitations.
- Class IV: Inability to carry out physical activities without discomfort at rest.

Current Medication Options

- Angiotensin-converting enzyme (ACE) inhibitors.
- ARB (angiotensin receptor blockers).
- Beta-blocker.
- Digoxin.
- Diuretic.
- Aldosterone blockade.

Principles of Treatment



Advanced Therapies

Cardiac Resynchronization



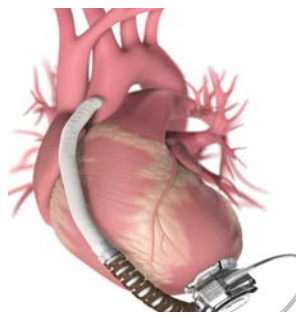
Ventricular Assist Devices (VAD)
CentriMag VAD



HeartMate II VAD



HeartWare HVAD



Heart Transplant

- Gold standard of HF treatment.
- Performed as the last option.
- About 2,200 patients will receive a donor heart out of 4,200 on waiting list annually.
- Most patients cannot be listed for transplant.

In Summary

- Medications improves survival.
- Transplants is limited by shortage of donor organs,
- 15% will die while on transplant list.
- Mechanical assist devices show promise for symptom relief and improved survival.

References

- Center for Disease Control and Prevention. (2016). Heart failure fact sheet. Retrieved from https://www.cdc.gov/dhdsp/data_statistics/fact_sheets/fs_heart_failure.htm
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- Yancy CW, Jessup M, Bozkurt B, et al. 2013 ACCF/AHA Guideline for the Management of Heart Failure: A Report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. *J Am Coll Cardiol*. 2013;62(16):e147-e239.