

Update in Advanced Heart Failure

Saturday, June 18, 2011
Madrid I ~ 8:45am - 9:30am

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Objectives

- Understand modern heart failure therapy
- Be aware of available advanced therapies
- Be more comfortable with patients who are recipients of advanced therapies

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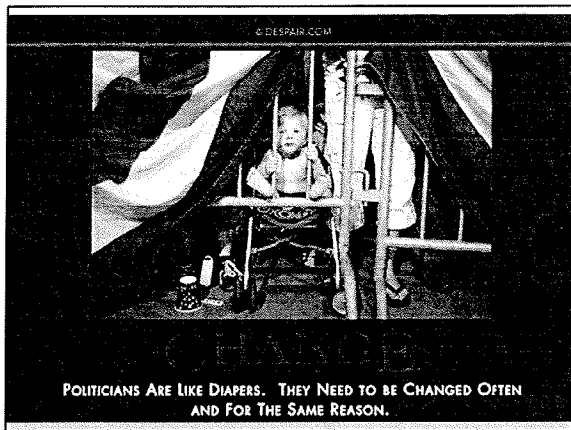

INTEGRIS


Update in Advanced Heart Failure

Douglas Horstmanshof, M.D., F.A.C.C.

 **INTEGRIS**
Advanced Cardiac Care

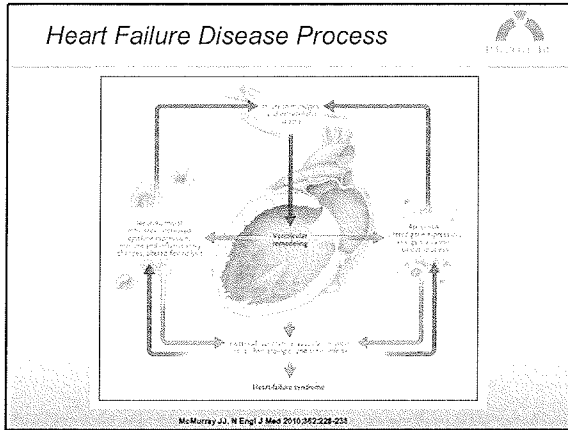
Co-Director, INTEGRIS Advanced Cardiac Care
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June 2011

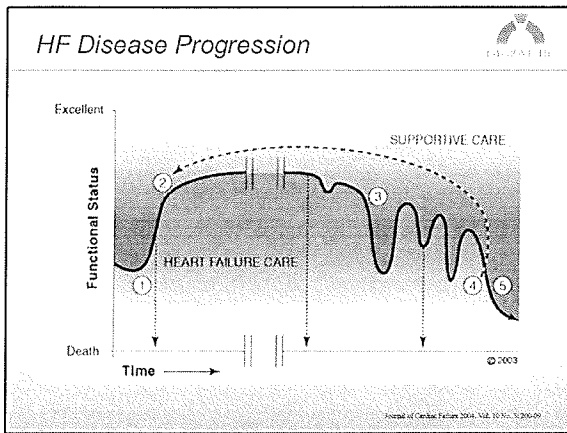



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Heart Failure (HF) Defined

- HF is a collection of symptoms (or *syndrome*) that can result from any structural or functional cardiac disorder that impairs the ability of the ventricle to fill with or eject blood.
 - Cardinal symptoms: dyspnea, fatigue, fluid retention
 - Focus on systolic heart failure, also known as weakened or enlarged heart
- An exceedingly complex series of cardiac structural, functional, and metabolic alterations subsequently occur:

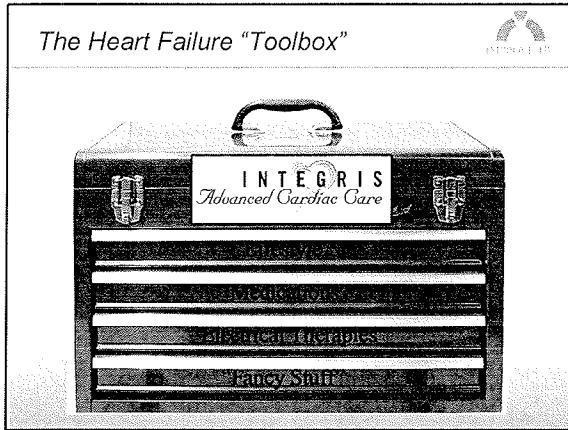


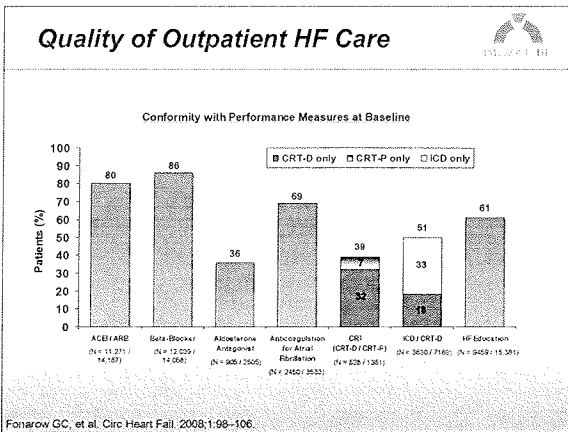


Heart Failure: Epidemic & Expensive

- **1.106 million** hospital discharges for HF in 2006, up from 877,000 in 1996.
- Outpatient visits for HF: **3.434 million**
- Direct cost for care of patients with HF estimated to be **\$39.2 billion**.
 - Likely underestimated because estimates based on data for HF as primary diagnosis or cause of death.

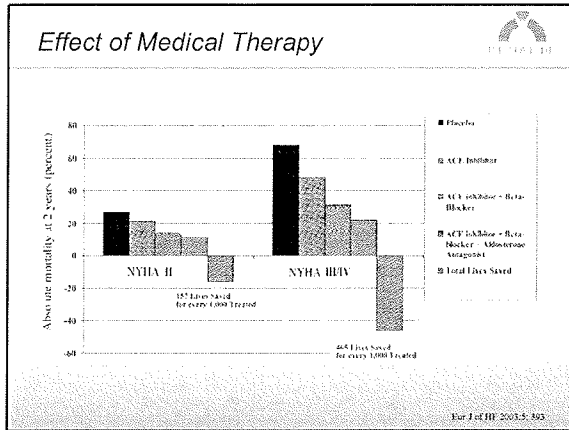
American Heart Association, Heart Disease and Stroke Statistics - 2010 Update





"Optimal" Medical Therapy

- Use all indicated classes of medications to prolong survival.
 - ACE-I/ARB, beta blockers, aldosterone antagonists, and hydralazine + nitrates.
 - Fish oils, ?statins.
- Remember diuretics and digitalis improve symptoms but not survival.
- Titrate to doses used in clinical trials if at all possible.
- Use medications studied in clinical trials.

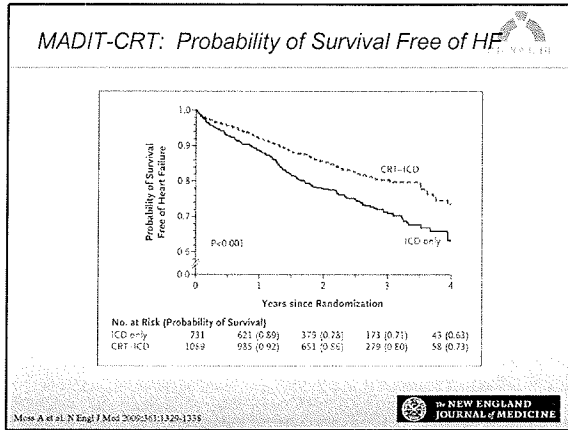


Electrical Therapies

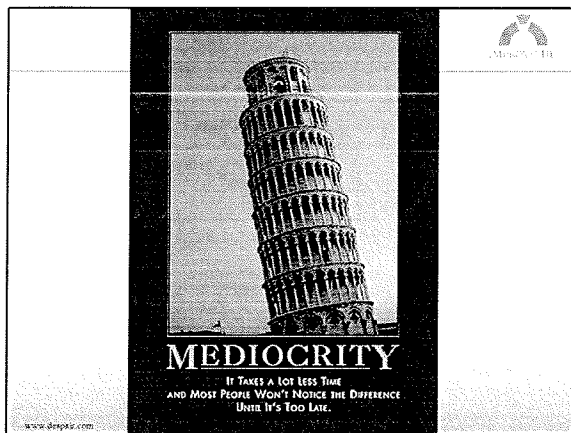
- Implantable Cardioverter-Defibrillators:
 - Used when ejection fraction persistently < 35% AND
 - NYHA Class 2 or 3 symptoms AND
 - Reasonable expectation of good quality of life for at least one year.

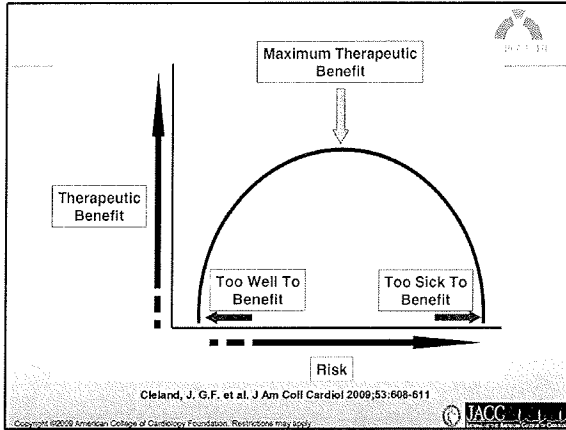
Electrical Therapies

- Biventricular ICDs / Pacemakers
 - Used when EF < 35% AND NYHA III-IV symptoms AND QRS ≥ 120 msec OR
 - LBBB (QRS ≥ 130 ms), EF ≤ 30% and NYHA II symptoms or NYHA I with ischemic heart failure.



- Risk Stratification in HF**
- Allows identification of patients that may require advanced therapies.
 - Allows advice to patients regarding life planning.
 - May influence physician thinking on therapies and early referral.
 - Care providers are not able to predict outcomes as effectively as models using objective data.

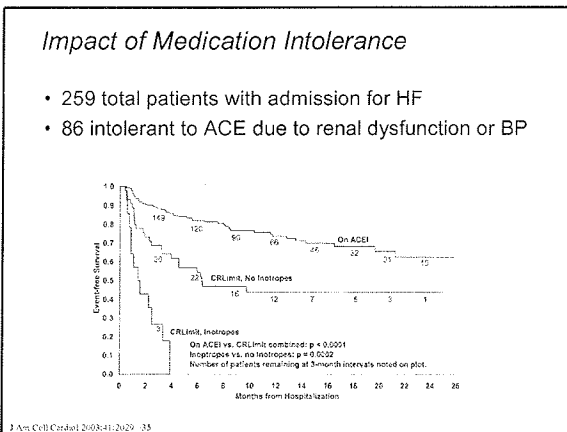




ACC / AHA HF Guidelines:

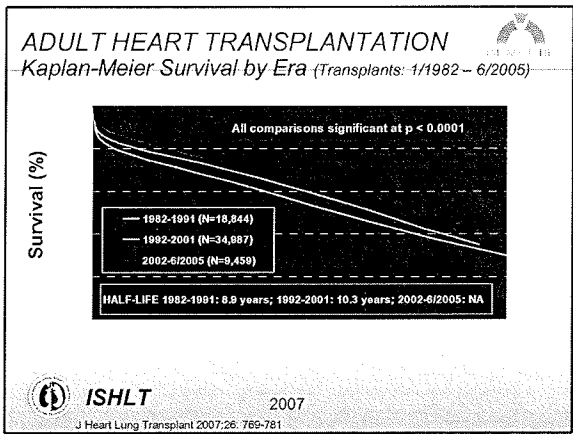
- Hospitalization is in and of itself an independent risk factor for shortened survival in patients with chronic HF. Hence, appropriate levels of symptomatic relief, support, and palliative care for patients with chronic HF should be addressed as an ongoing key component of their plan of care, especially when hospitalized with acute decompensation.

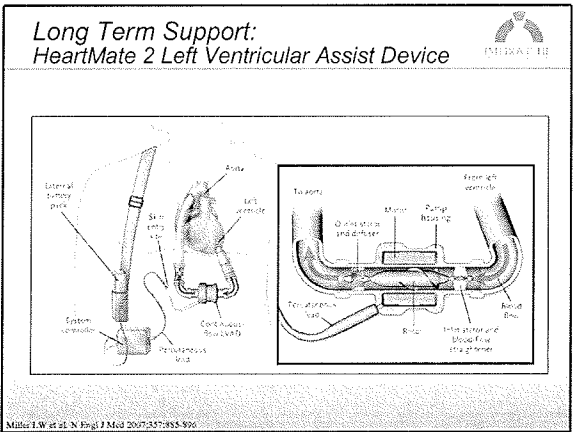
J Am Coll Cardiol. doi:10.1016/j.jacc.2008.11.009 (Published online 26 March 2009)

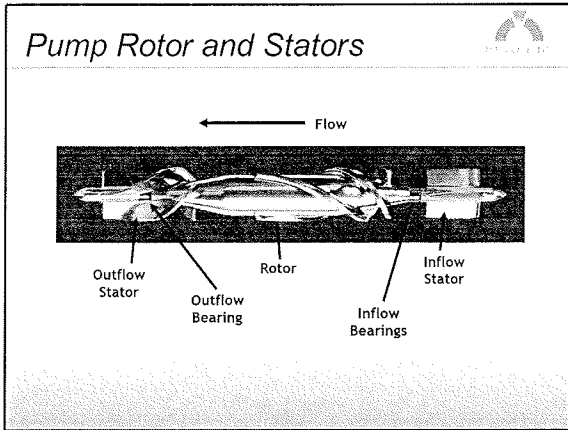


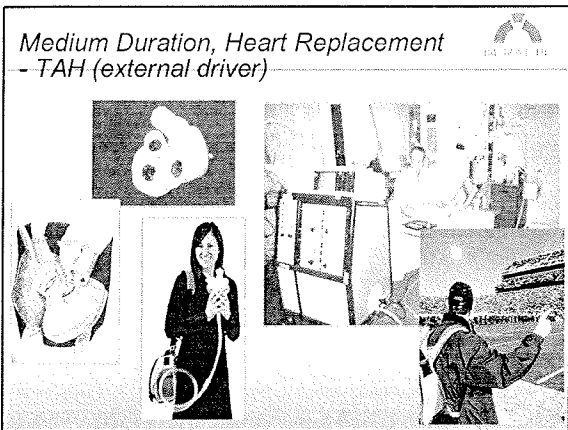
Treatment Options for High Risk Advanced HF:

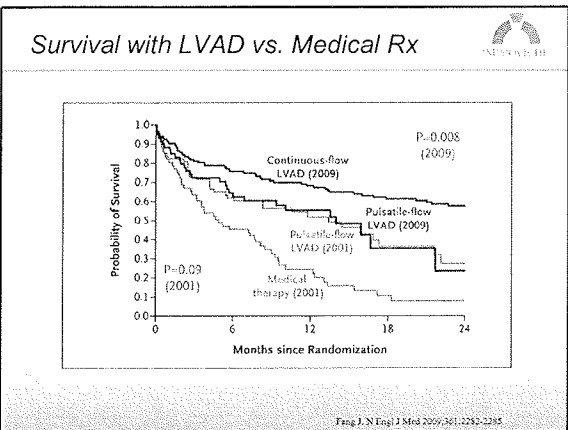
- Cardiac Transplantation
- Mechanical Circulatory Support
 - Left Ventricular Assist Device (LVAD) as either bridge to transplant (BTT) or destination therapy (DT)
 - Total Artificial Heart
- Palliative Care / Hospice

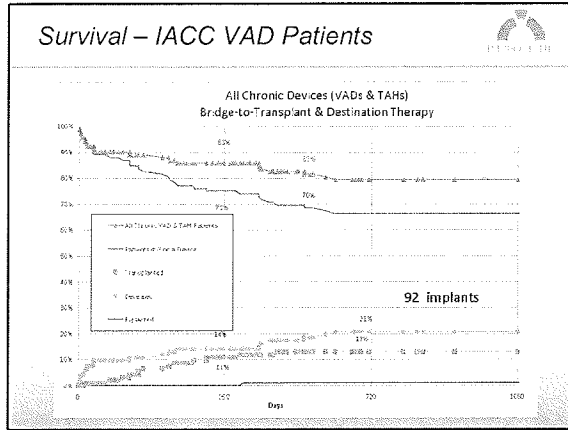


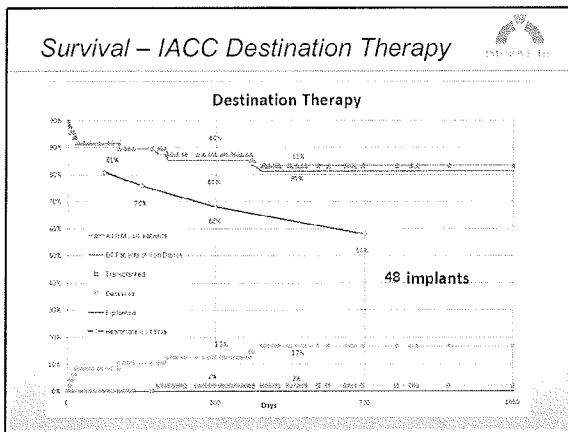


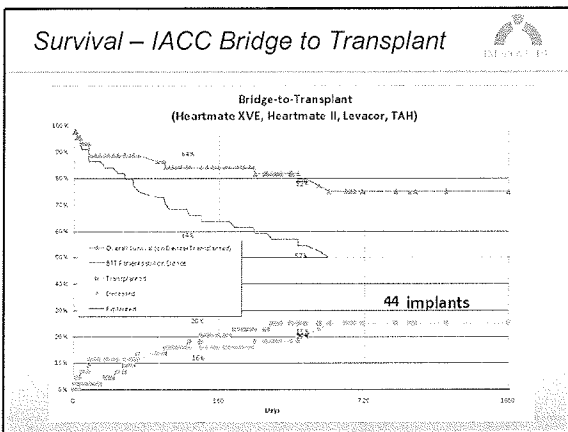















Functional Status after VAD 

98 percent of patients were NYHA Class IV at baseline.

Paganini F, Miller L, Russell S, JACC: Vol 54, No 4, 2009.

Advanced HF Assessment Appropriate: 

- Basic Criteria:
 - Severe LV dysfunction (EF 25% or less)
 - NYHA Class III – IV symptoms
 - Age up to 65-70 for HTx, 70-75 for DT VAD
 - Generally compliant with recommended therapy
 - No active use of illicit substances or significant active use of alcohol. Tobacco use is possibly treatable.
 - Insurance coverage of some kind necessary
 - Adequate social support system

Advanced HF Assessment Appropriate: 

- Clinical Criteria:
 - Recurrent hospitalizations or ER visits. (> 1- 2 / year)
 - Inability to tolerate medical therapy.
 - Cardiorenal syndrome: may be evidenced by increasing diuretic resistance or frank increases in SCr.
 - Nonresponders to biventricular pacing.
 - Patients requiring inotropic support.
 - > 10% annual mortality predicted from survival scores.

Who Will Not Benefit?



- Multisystem organ failure.
- Septic shock with LV dysfunction.
- Other severe, quality of life destroying comorbidities.
- Severe neurologic event.
- Patient with poor or no family support or realistic means of paying for device.

- When in doubt: CALL!! We are always happy to help!!

Summary



- Heart failure is a lethal, progressive disease.
- Use all of the tools in the "toolbox" to optimize outcomes for each individual with systolic heart failure.
- Prediction of the risk of mortality is a critical part of HF care and guides decision making regarding timing of advanced HF therapy.
- Refer early if patients may be candidates for advanced HF therapies.

