



## Clinical Practice Guidelines for the Management of Congestive Heart Failure in Adults

Source: The Cleveland Clinic Foundation HF management SOC/NYHA Functional Class/ACC/AHA Guidelines endorsed by the Heart Failure Society of America, 2001

### Assessment:

- Determine Systolic vs. Diastolic Dysfunction
  - Obtain new echocardiogram (Echo) if previous Echo > 1 year ago with EF < 40% (Echo, MUGA, Cardiac Cath.)
- Determine etiology beyond LV function
  - Complete Metabolic Profile, TSH, T4, ECG, CXR, CBC, serum BNP {brain natriuretic peptide}, hepatic function studies
- Adjunct Studies: Max O<sub>2</sub> Uptake, RVEF, PET Scan
- Determine NYHA Heart Failure Classification:
  - Class I: Asymptomatic on ordinary physical activity
  - Class II: Symptomatic on ordinary physical activity (i.e. long distance walking, climbing two flights of stairs)
  - Class III: Symptomatic on less than ordinary physical activity or marked symptoms with ADL (i.e. short distance walking, climbing one flight of stairs)
  - Class IV: Symptomatic at rest or on any activity

### Non-Pharmacologic Therapies:

- Fluid restriction < 2 L/day (2000cc/day)
  - Decrease the fluid restriction to < 1500 cc/day with serum Na<sup>+</sup> below 130mEq/L
- 2-gm sodium diet for HF classes II, III and IV
- Cardiac Rehab consult for Phase II program (if not home bound)
- Home health consult (if homebound)
  - Dietary consult if noncompliant with diet and/or fluid restriction
  - Social service consult
  - Medication treatment plan
- Assess if patient has a scale at home (daily weight monitoring)
- Patient education regarding: diet, medications, activity, fluid management (including daily weights, “ideal” weight and how to treat weight increase), and signs & symptoms of worsening condition.

### Pharmacologic Therapies:

**Loop diuretic** for volume overload: furosemide, bumetanide, spironolactone, zaroxolyn:

- Maintenance dosing vs. aggressive dosing with symptoms
- Add thiazide drugs for synergistic response as necessary
- Add spironolactone (if creatinine < 2.5mg/dl) 25mg qd (or less) for Class III & IV (used as an aldosterone inhibitor)

**Digoxin** dose based on weight, age, gender, creatinine clearance, and concomitant meds

- Generally initiated at a dose of 0.125-.25mg qd, start at 0.125mg qod for those patients 70 years of age, impaired renal function or lean body mass. Maintain serum digoxin level of 0.7-2.0 ng/dl

**ACE inhibitor:** Titrate to target dose, as tolerated: captopril, \*enalapril, \*lisinopril

Do not use if creatinine: > 3.0 mg/dL or potassium > 5.5 mEq/L

- Begin therapy if SBP > 90mm Hg without vasodilator therapy or > 80mm Hg and asymptomatic with other vasodilator therapy
- Begin therapy if serum sodium > 134mEq/L
- Alternative to ACEI: Hydralazine/Nitrate combination or Angiotensin II Receptor Blocker
- Do not hold vasodilator unless SBP < 80mmHg or signs/symptoms of orthostasis, mental obtundation, or decreased urine output

**Beta-blocker:** Titrate to target doses as tolerated:\*\*Coreg<sup>®</sup>, metoprolol SR

- \*\*Use in NYHA Class II or III patients. May be used in NYHA Class I patients with history of MI or HTN
- \*\*May begin in NYHA Class IV patients who are euvolemic without significant signs/symptoms of volume overload
- Do not initiate therapy if history of hepatic failure, bronchospasm, heart blocks, sick sinus syndrome without permanent pacemaker, overt congestion, symptomatic hypotension

**Ischemic Cardiomyopathy:** Add nitrate therapy, aspirin and lipid lowering agents to reduce LDL

\*Enalapril and lisinopril have a longer duration of action.

\*\*Coreg<sup>®</sup> is the only beta-blocker indicated in mild, moderate, and severe HF and in essential HTN

### Contributing Factors:

To be assessed at the patient's initial examination:

- Identification of cardiovascular risk factors: hypertension, dyslipidemia, coronary heart disease, diabetes
- Identification of fixed risks: family history, age, gender
- Identification of modifiable risk factors: sedentary lifestyle, obesity, stress, smoking, hypertension
- Identification of co-morbidities i.e. history of diabetes, respiratory disease, renal disease, etc.

### Patient Education:

- Patient should receive written management plans that are reviewed annually and/or as needed with the assistance of the physician and appropriate specialists. The management plan should incorporate the following facets of care:
- Basic facts about congestive heart failure (provide written material for patient reference)
- Medication facts
- Planning activities of daily life in conjunction with activity tolerance
- Emphasize importance of daily weights with instructions of when to notify MD
- Smoking Cessation program referral as indicated
- Refer to WellCare Congestive Heart Failure Disease Management Program
- Emphasize importance of adhering to a low sodium diet

#### Legal Disclaimer:

These clinical practice guidelines were developed to assist practitioners in making decisions about appropriate health care for specific clinical circumstances. These guidelines are not fixed protocols that must be followed, but are intended for health care professionals and providers to consider. While they identify and describe generally recommended courses of intervention, they are not presented as a substitute for the advice of the physician or other knowledgeable health care professional or provider service provider treating the patient. Individual patients may require different treatments from those specified in a given guideline. Guidelines are not entirely inclusive or exclusive of all methods of reasonable care that can obtain/produce the same results. While guidelines can be written that take into account variations in clinical settings, resources, or common patient characteristics, they cannot address the unique needs of each patient nor the combination of resources available to a particular community or health care professional or provider. Deviations from clinical practice guidelines may be justified by individual circumstances. Thus, these guidelines must be applied based on individual patient needs and are not a substitute for the professional medical judgment of the provider of care.