

# 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 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 O2 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 Interventions:

- Fluid restriction < 2 L/day (2000cc/day)
  - ~ Decrease the fluid restriction to < 1500cc/ day with Serum Na<sup>+</sup> below 130mEq/L
- 2-gm Sodium Diet for HF classes II, III, IV
- Cardiac Rehab Consult for Phase II program (if not home bound)
- Home Health Consult (if homebound)
  - ~ Dietary Consult if noncompliant with diet and fluid restriction and Social Service Consult
  - ~ Medication treatment plan
- Assess if patient has 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.

## Pharmacological 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 < 205mg/ 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 0.125 qod for those patients over 70 years of age, impaired renal function or lean body mass. Maintain serum digoxin level of 7-2.0ng/ dl

### **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.
- Pneumococcal and influenza vaccinations, as appropriate

### **Patient Education:**

Patient should receive written management plans that are reviewed and revised annually with the assistance of a diabetic team consisting of the physician, certified diabetic educator, and registered dietician. The management plan should incorporate the following facets of care:

- Blood glucose management and frequency of self-monitoring of blood glucose (SMBG) determined by severity of diabetes.
- Nutrition therapy, as recommended by registered dietician.
- Blood pressure management.
- Exercise program for weight loss, as appropriate
- Training in self management skills and problem solving, if appropriate, refer to diabetic education classes and diabetes disease management program.
- Smoking cessation program

**ACE Inhibitor:** ACE Inhibitor therapy, as indicated for any degree of albuminuria and to delay the progression of nephropathy, regardless of the presence or absence of hypertension (For those patients with hypertension and are intolerant to ACE Inhibitors consider ARB therapy). Do not use if creatinine:  $> 3.0$  mg/ dL or potassium  $> 5.5$  mEq/L

- Titrate to target dose, as tolerated: captopril, enalapril, lisinopril
- Begin therapy if SBP  $> 90$ mm/Hg without vasodilator therapy or  $> 80$ mmHG and asymptomatic with or vasodilator therapy
- Begin therapy if serum sodium  $> 134$ mEq/L
- Alternative to ACEI: Hydralazine/ Nitrate combination or Angiotensin II Receptor Blocker
- Do not hold vasodilator unless SBP  $< 80$ mmHg or signs/ symptoms of orthostatsis, mental obtundation, or decreased urine output

#### **HMG-CoA Reductase Inhibitors:**

- Statin therapy to achieve LDL reduction

#### **Antidepressant Therapy:**

- Anti-depressants to reduce feelings of depression and anxiety, as appropriate

#### 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 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 a health care professional or a 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.