VALLEY MEDICAL GROUP
Prevention & Medical Care To Help You Live Better, Longer.

Clinical Champion Update

Date: 11/11/24 *Subject: Congestive Heart Failure*

Preventing Heart Failure

Prior iterations of this blog have focused on managing heart failure once it's been diagnosed. But wouldn't it be nice if we could help patients manage their health so that they never develop heart failure? The American College of Cardiology has guidelines with just this goal in mind, divided into patients at risk for heart failure and patients with pre-heart failure.

Patients at risk for heart failure

At-risk patients are "without symptoms, structural heart disease, or cardiac biomarkers of stretch or injury", but have "hypertension, atherosclerotic CVD, diabetes, metabolic syndrome and obesity, exposure to cardiotoxic agents, genetic variant for cardiomyopathy, or positive family history of cardiomyopathy."

For our purposes in family practice, most patients at risk for HF have one or more of the following conditions:

- Hypertension
- Diabetes
- Coronary vascular disease or high CVD risk
- Metabolic syndrome and obesity

What to do?

- Hypertension
  - Optimal control to goal <130/80
- Diabetes with CVD or high risk for CVD
  - Add SGLT2i
- CVD
  - Optimal management of CVD
- For all at-risk patients:
  - Encourage the usual—healthy diet, regular exercise, stop smoking, minimize alcohol
  - Screen with a BNP. If >=50 pg/ml:

        - Order echo
        - Refer to cardiologist
    - Use a validated multivariable risk calculator
        - Recommended: PCP-HF (https://pcphf.brightoutcome.com/#/home)
        - Results are useful to help patients understand their risk and encourage lifestyle and medical management changes

Patients with pre-heart failure

Pre-HF patients, like at-risk patients, have no symptoms or signs of HF, but do have at least one of the following:

- Structural heart disease
    - Reduced EF
    - LVH or RVH
    - Chamber enlargement
    - Valvular disease
    - Wall motion abnormalities
- Evidence for increased filling pressures (via echo or invasive hemodynamic measurements)
- Risk factors along with elevated BNP and/or persistently elevated troponins

Patients with pre-HF should continue any lifestyle modifications and management strategies that were started when they were considered only "at-risk". Additional management should be tailored to specific situations:

- LVEF<=40
    - Start ACEi to reduce mortality and prevent symptomatic HF
    - ARB can be subbed if pt has ACEi intolerance, though there's a paucity of studies in this setting to prove efficacy
    - Beta blocker (metoprolol, carvedilol, bisoprolol)
- LVEF<=40 and recent MI
    - ACEi or ARB (there's better evidence for benefit of ARB in this setting)
- History of MI (recent or not) or ACS
    - Statin therapy: in addition to reducing risk of repeat MI, statins in this setting have been shown to reduce risk of incident HF.
- History of MI (recent or not) or ACS with LVEF<=40
    - Beta blocker (metoprolol, carvedilol, bisoprolol)
- At least 40 days post-MI with LVEF ≤30%
    - Consider ICD to prevent sudden cardiac death (SCD).
- LVEF<=50
    - **AVOID** thiazolidinediones
        - They increase fluid retention and lead to increased rates of HF in patients with type 2 diabetes
    - **AVOID** nondihydropiridine calcium channel blockers
        - Diltiazem and verapamil
            - As negative inotropes, they weaken cardiac contractions

- Generally not tolerated in HF and may be associated with increased risk of HF

Practice-changing recommendations

Most of the information above involves slight modification of our current practice, but the new recommendation to check BNP on selected patients with possible echo / cardiology referral depending on results might be problematic. This is because, according to our lab, insurance coverage for BNP testing is tricky:

- ❖ Most covered diagnoses involve the patient already being diagnosed with HF
- ❖ Otherwise, only diagnoses involving breathing problems are likely to be covered:
  - ➢ J44.1 COPD exacerbation
  - ➢ R06.00, R06.02, R06.03, R06.09, R06.89, R06.9 Various permutations of dyspnea

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