

# Heart Failure Guidelines: Helping Your Patients



Ben Tyrrell, MD, FRCPC; and Justin A. Ezekowitz, MBBCh, MSc, FRCPC

Presented at the University of Alberta's 6th Annual Cardiology Update for General Practitioners and Internists, Edmonton, Alberta.

Heart failure (HF) is a cause of significant morbidity and mortality in Canada. The Canadian Cardiovascular Society (CCS) has recently provided an update for the diagnosis and management of HF.<sup>1</sup> In order to enhance the uptake and implementation of these guidelines, they are notably more concise and provide 65 practical tips for physicians caring for patients with HF. Important new additions include:

- acute HF,
- diastolic HF,
- HF in the elderly and end-of-life issues.

## *New for diagnosis*

The diagnosis of HF is rooted in the accurate clinical history and physical exam. Patients with suspected HF should have an ECHO and, where available, measurement of brain natriuretic peptide (BNP). BNP provides very high negative predictive values and therefore can be helpful to rule-out HF. The guideline highlights the need to look at the local laboratory assay levels and to become familiar with the use of this valuable marker. Also highlighted is the prevalence of HF with preserved systolic function (HFPSF); a normal ejection fraction (EF) by ECHO does not necessarily exclude HF.

Recent findings from an Ontario study emphasize that nearly 50% of patients with clinical HF may have normal systolic function, yet are at significant risk for poor outcomes.<sup>2</sup> Once clinical HF is confirmed, a thorough work-up of associated diseases directed by the clinical scenario is important, including coronary angiography (for those at risk for coronary artery disease [CAD]) and aggressive treatment of these associated conditions, if found (Figure 1).

## *New emphasis on non-pharmacologic therapy*

### *Exercise*

Patients with HF are now recommended to exercise three to five times per week for at least 30 minutes. This can be matched to the patient's preference (e.g., swimming, walking, biking), and should be of moderate intensity (60% to 80% of peak heart rate, or a Borg score of four out of 10). Ideally, patients should be referred to cardiac rehabilitation where available.

**Dr. Tyrrell** is an Interventional Fellow, University of Alberta, Edmonton, Alberta.

**Dr. Ezekowitz** is the Director of the Heart Function Clinic, University of Alberta, Edmonton, Alberta.

## Dietary education

Dietary education, with an emphasis on salt reduction, can help prevent recurrent hospitalizations and improve symptoms. The guidelines also highlight the need to discontinue inappropriate supplements (such as the coenzyme Q10 or herbal supplements) and to discontinue chelation therapy in any form, as these can exacerbate HF without any proven efficacy.

## Multidisciplinary clinic

Referral to a multidisciplinary clinic is now a Class I recommendation as a survival benefit has been shown in both trials and observational studies. An emphasis is placed on a collaborative care model, with specific guidance as to

when to refer and timeliness expected are provided elsewhere.<sup>3,4</sup> A patient with a new diagnosis of HF should be referred to an internist, cardiologist or a multidisciplinary disease management program within four weeks if stable and compensated, or within two weeks if unstable, decompensated, after a hospitalization for HF or MI or progressive HF.

## Rational drug therapy

The cornerstone of treatment is the aggressive treatment of all known risk factors, including:

- hypertension,
- CAD and
- diabetes.

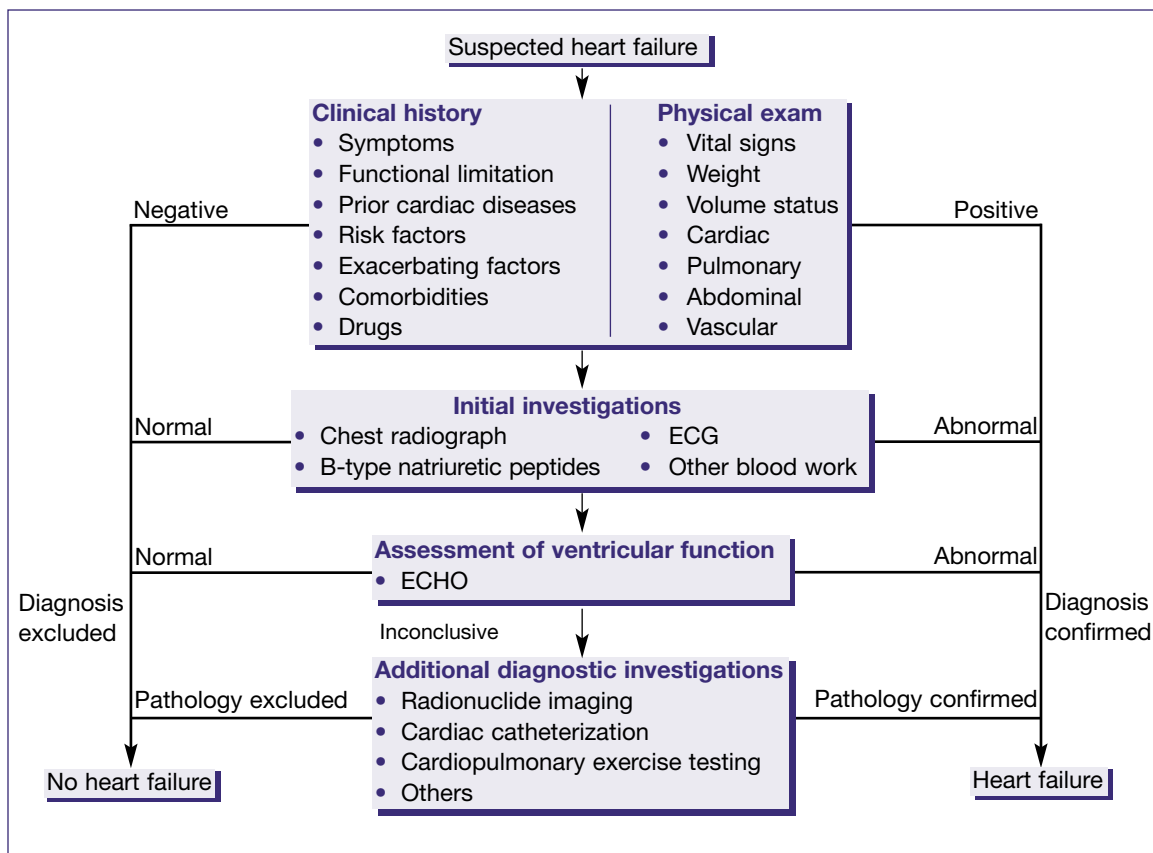


Figure 1. Algorithm for the diagnosis of heart failure (HF). See Canadian Cardiovascular Society (CCS) Guidelines for details.

Key medications and the order in which to change therapy is provided (Figure 2). Angiotensin-converting enzyme inhibitors and  $\beta$ -blockers, initiated and titrated to the target dose, are now joined by Class I recommendations for spironolactone and angiotensin-receptor blockers (hydralazine and nitrates remain a Class II recommendation). These latter recommendations may prove the most challenging to initiate in a primary care office and could be done by referral to a specialist clinic. Reiterated is the need to use acetylsalicylic acid

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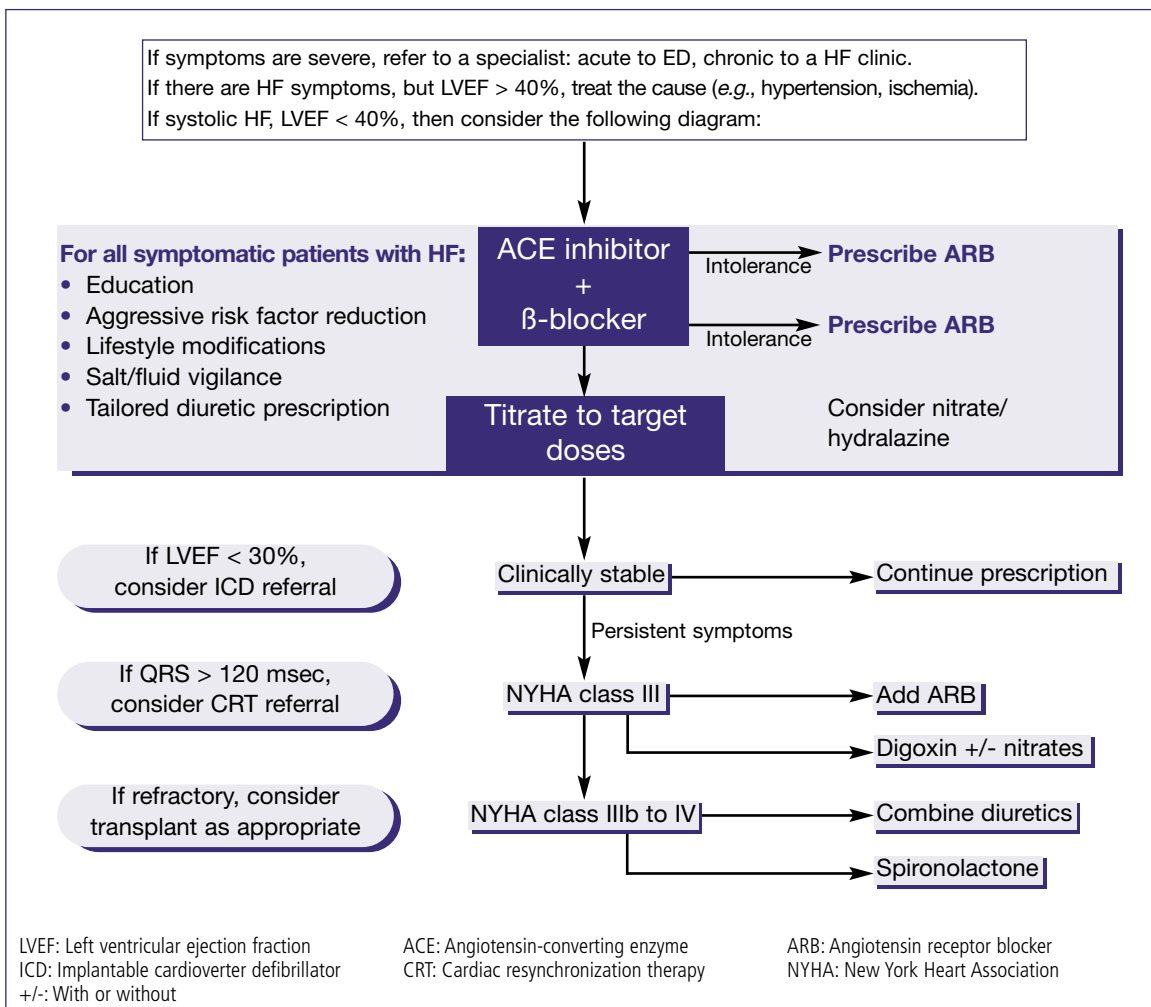


Figure 2. Simplified treatment algorithm for HF. See CCS Guidelines for details.

or coumadin in patients with another indication for primary or secondary prevention (e.g., CAD, atrial fibrillation), as HF is not an indication for either of these by itself.

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### *New device therapy*


Implantable cardioverter-defibrillators (ICDs) and cardiac resynchronization therapy (CRT) are proven efficacious therapy and the following patients should be considered for this these after referral to a specialty clinic:

- ICD
  - EF  $\leq$  35%, New York Heart Association (NYHA) class I to III, ischemic etiology
  - EF  $\leq$  35%, NYHA class II to III, non-ischemic etiology after nine months of appropriate drug therapy
  - All patients with high-risk ventricular arrhythmias
- CRT
  - EF  $\leq$  35%, NYHA class III to IV, sinus rhythm, QRS  $\geq$  120 msec

### *Consideration of patient preferences*

The guidelines have a new section devoted to issues surrounding end-of-life care. This issue has traditionally not been emphasized in HF guidelines, but there is a growing need to recognize advanced directives and palliative care with both the patient and their family. Engaging patients and their families in an open discussion about prognosis as well as the possible modes of death (i.e., sudden cardiac death, progressive HF) should be encouraged early after the diagnosis of HF.

### *Conclusions*

HF is a complex multi-system disorder in which tremendous gains have been made that limit the morbidity and mortality suffered by patients. The CCS Guidelines provide practical evidence-based guidelines for the diagnosis and management of patients with HF. 

#### References

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