A consensus document produced by HeFSSA on behalf of SAHA

Members present at HeFSSA Guideline Workshop 05.02.2006:

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Special guest:

- Prof A Mebazaa – France, Member of The Task Force on Acute Heart Failure of the European Society of Cardiology.

Introduction

As a member of the European Society of Cardiology (ESC), The South African Heart Association (SA Heart) accepts the guidelines provided by the ESC without modification. This document should be seen in this context and is not a modification of the ESC guidelines, but highlights specific regional differences. As stated in the introduction of the ESC guidelines on chronic heart failure, "national health policy as well as clinical judgement may dictate the order of priority of implementation [of these guidelines]. It is recognised that some interventions may not be affordable in some countries for all appropriate patients. The recommendations in these guidelines should therefore always be considered in the light of national policies and local regulatory requirements for the administration of any diagnostic procedure, medicine, or device."

Acute Heart Failure Guidelines

Clinical Assessment

It is felt that the "clinical severity" classification is the most useful to categorise the acute heart failure patient (page 388, 3.1.3). Since no figure has been included in the original document, we have added figure 1.

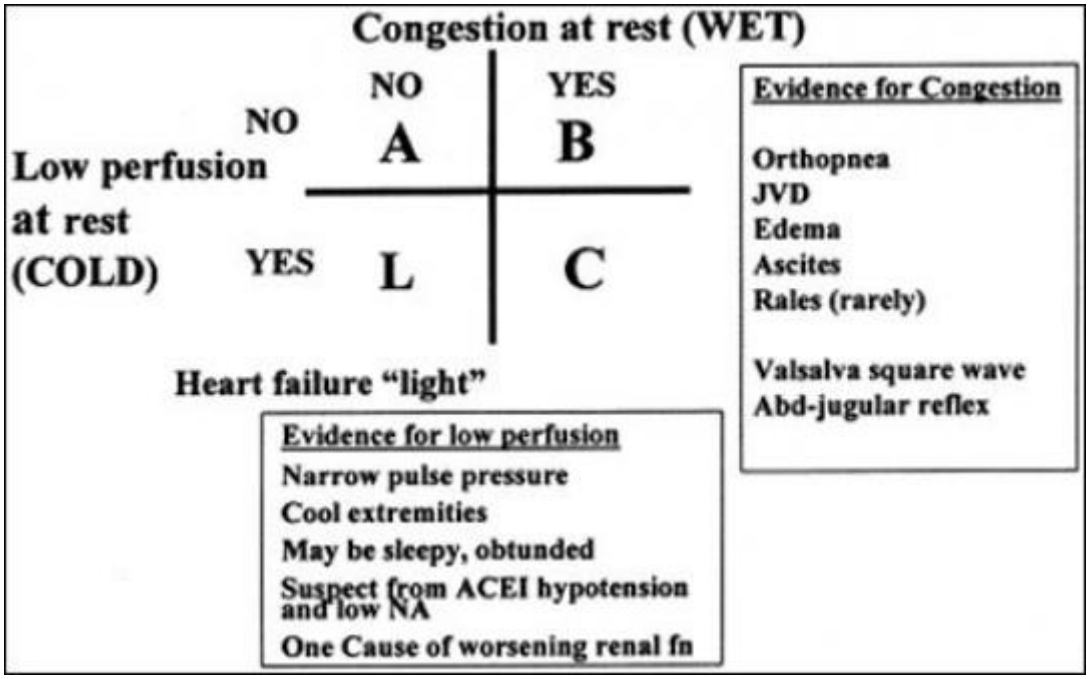

Figure 1: Clinical severity classification for assessment of acute heart failure (Stevenson, EJHF, 31; 251)

Diagnostic Algorithm

In addition to the laboratory tests as outlined in the ESC guideline, it was felt that:

- The following laboratory tests are not required on every acute heart failure patient, but should be used as clinically indicated: C-reactive protein, D-dimer, CK-MB.
- At this stage, plasma B-type natriuretic peptide (BNP) should best be interpreted as a "rule out test", i.e. a normal level essentially excludes the diagnosis of acute heart failure causing dyspnoea.
- Any patient presenting with acute heart failure requires an echocardiogram as soon as possible. While it is recognised that this depends on local availability, echocardiography should be arranged during the index hospital admission.

Treatment Approaches

- Excessive use of high-dose intravenous diuretics should be avoided. Intravenous nitrates are an effective pre-load reducer and must be used in acute heart failure that presents with adequate blood pressure.
- Hemodynamic response to inotropic agents may be affected by background b-blocker use. Milrinone or levosimendan (two drugs that do not act via the b-receptor) are preferred as b-blocker doses can be maintained or reduced minimally.
- Cardioversion of atrial fibrillation either by electrical or chemical means carries an identical risk for distal embolisation. Therefore both approaches require the same anticoagulatory measures.

Medication

It is recognised that the following drugs, that are mentioned in the ESC guidelines, are unavailable in South Africa:

- All intravenous b-blockers
- Enoximone
- Noradrenaline
- Nesiritide
- Dofetalide

The following drugs are available for use under Section 21:

- Levosimendan

Chronic Heart Failure Guidelines

Diagnosis

While the benefits of magnetic resonance imaging of the heart (cardiac MRI) are acknowledged, it is recognised that cardiac MRI requires specific software and an experienced radiologist for accurate assessments.

Medical Therapy with B-Blockers or ACE-Inhibitors: Which One Should Be Started Initially?

The ESC guidelines were published prior to CIBIS III (Circulation. 2005; 112:2426-2435), which showed that starting treatment with a **b**-blocker (bisoprolol) in mild-moderate CHF, followed by the addition of an ACE-inhibitor (enalapril), is as effective and well tolerated as starting treatment with an ACE-inhibitor. The CARMEN study (J Am Coll Cardiol.2004; 44:1825-1830), supports initiation of therapy with carvedilol in black South Africans. The preference of the treating physician and consideration of patient characteristics may determine which medication to initiate first.

Aldosterone Antagonists

The up-titration of these agents requires special care, that includes careful monitoring of serum potassium levels. High-risk individuals include those with low body weight, elderly, diabetic or decreased renal function.

Angiotensin II-Receptor-Blockers or Aldosterone Antagonists?

We endorse the findings of the ESC guidelines regarding the lack of evidence for the recommendation of the next addition in class III heart failure in addition to background diuretic, ACE-inhibitor and b-blocker. The easier and cheaper way is to add the aldosterone antagonist first.

Hydralazine and Nitrates

The combination of hydralazine (target dose of 225 mg daily in three divided doses and isosorbide dinitrate 120 mg daily in three divided doses) in addition to therapy with a diuretic, ACE-inhibitor and b-blocker has been found to be beneficial in African-Americans in reducing mortality and morbidity (N Engl J Med 2004; 351:2049-2057). It is felt that the data can be extrapolated to black South Africans, although the impression is that all population groups may benefit.

Implantable Devices

The South African recommendations for the implantation of Internal Cardiac Defibrillators and for biventricular pacemakers will be provided through the offices of CASSA.