Complete Summary

GUIDELINE TITLE

Evaluation and therapy for heart failure in the setting of ischemic heart disease: HFSA 2006 comprehensive heart failure practice guideline.

BIBLIOGRAPHIC SOURCE(S)

Heart Failure Society of America. Evaluation and therapy for heart failure in the setting of ischemic heart disease. J Card Fail 2006 Feb;12(1):e104-11. [113 references] PubMed

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Heart Failure Society of America. Heart Failure Society of America (HFSA) practice guidelines. HFSA guidelines for management of patients with heart failure caused by left ventricular systolic dysfunction--pharmacological approaches. J Card Fail 1999 Dec;5(4):357-82.

** REGULATORY ALERT **

FDA WARNING/REGULATORY ALERT

Note from the National Guideline Clearinghouse: This guideline references a drug(s) for which important revised regulatory and/or warning information has been released.

- August 16, 2007, Coumadin (Warfarin): Updates to the labeling for Coumadin to include pharmacogenomics information to explain that people's genetic makeup may influence how they respond to the drug.
- October 6, 2006, Coumadin (warfarin sodium): Revisions to the labeling for Coumadin to include a new patient Medication Guide as well as a reorganization and highlighting of the current safety information to better inform providers and patients.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Heart failure in the setting of ischemic heart disease

GUIDELINE CATEGORY

Evaluation
Management
Treatment

CLINICAL SPECIALTY

Cardiology
Family Practice
Internal Medicine
Thoracic Surgery

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

To provide recommendations for the evaluation and therapy for heart failure in the setting of ischemic heart disease

TARGET POPULATION

Patients with heart failure in the setting of ischemic heart disease

INTERVENTIONS AND PRACTICES CONSIDERED

Evaluation

1. Assessment of risk factors
2. Cardiac catheterization
3. Noninvasive stress imaging
4. Cardiac angiography
5. Additional testing including exercise or pharmacologic stress myocardial perfusion imaging or echocardiography, cardiac magnetic resonance imaging, and positron emission tomography

Management/Treatment

1. Risk factor management
2. Antiplatelet therapy including aspirin, clopidogrel, and warfarin
3. Angiotensin-converting enzyme inhibitors
4. Beta-blockers
5. Nitrate preparations
6. Calcium channel blockers
7. Coronary revascularization with coronary artery bypass surgery or percutaneous coronary intervention

MAJOR OUTCOMES CONSIDERED

- Survival
- Stroke rates
- Myocardial infarction rates
- Hospitalization rates

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases
Searches of Unpublished Data

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Databases searched included Medline and Cochrane. In addition, the guideline developers polled experts in specific areas for data.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Level A: Randomized, Controlled, Clinical Trials
May be assigned based on results of a single trial

Level B: Cohort and Case-Control Studies
Post hoc, subgroup analysis, and meta-analysis
Prospective observational studies or registries

Level C: Expert Opinion
Observational studies – epidemiologic findings
Safety reporting from large-scale use in practice

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The Heart Failure Society of America (HFSA) Guideline Committee sought resolution of difficult cases through consensus building. Written documents were essential to this process, because they provided the opportunity for feedback from all members of the group. On occasion, consensus of Committee opinion was sufficient to override positive or negative results of almost any form or prior evidence.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

"Is recommended": Part of routine care
Exceptions to therapy should be minimized.

"Should be considered": Majority of patients should receive the intervention. Some discretion in application to individual patients should be allowed.

"May be considered": Individualization of therapy is indicated

"Is not recommended": Therapeutic intervention should not be used

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The process of moving from ideas of recommendations to a final document includes many stages of evaluation and approval. Every section, once written, had a lead reviewer and 2 additional reviewers. After a rewrite, each section was assigned to another review team, which led to a version reviewed by the Committee as a whole and then the Heart Failure Society of America (HFSA) Executive Council, representing 1 more level of expertise and experience. Out of this process emerged the final document.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The strength of evidence (A, B, C) and strength of recommendations are defined at the end of the "Major Recommendations" field.

Evaluation for Coronary Artery Disease (CAD)

- Assessment for risk factors for CAD is recommended in all patients with chronic heart failure (HF) regardless of ejection fraction (EF). (Strength of Evidence = A) The diagnostic approach for CAD should be individualized based on patient preference and comorbidities, eligibility, and willingness to perform revascularization. (Strength of Evidence = C)
- It is recommended that patients with HF and angina undergo cardiac catheterization with coronary angiography to assess for potential revascularization. (Strength of Evidence = B)
- It is recommended that patients with HF, no angina, and known CAD should undergo noninvasive stress imaging and/or coronary angiography to assess severity of coronary disease and the presence of ischemia. (Strength of Evidence = C)
- It is recommended that patients with HF, no angina, and unknown CAD status who are at high risk for CAD should undergo noninvasive stress imaging and/or coronary angiography to assess severity of coronary disease and the presence of ischemia. (Strength of Evidence = C)
- In patients with HF, no angina, and unknown CAD status who are at low risk for CAD, noninvasive evaluation should be considered and coronary angiography may be considered. (Strength of Evidence = C)
- Any of the following imaging tests may be used to identify inducible ischemia or viable but noncontractile myocardium:
    - Exercise or pharmacologic stress myocardial perfusion imaging
    - Exercise or pharmacologic stress echocardiography
    - Cardiac magnetic resonance imaging (MRI)
    - Positron emission tomography scanning

  (Strength of Evidence = B)

- It is recommended that the following risk factors be managed according to the indicated guidelines:
    - Lipids (see National Cholesterol Education Program Adult Treatment Panel III)*

- Smoking (see the National Guideline Clearinghouse [NGC] summary of the Heart Failure Society of America [HFSA] guideline Prevention of Ventricular Remodeling, Cardiac Dysfunction, and Heart Failure)
- Physical activity (see the NGC summary of the HFSA guideline Nonpharmacological Management and Health Care Maintenance of Patients with Chronic Heart Failure)
- Weight (see the NGC summary of the HFSA guideline Prevention of Ventricular Remodeling, Cardiac Dysfunction, and Heart Failure)
- Blood pressure (see the NGC summary of the HFSA guideline Managing Patients with Hypertension and Heart Failure and The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7) Guidelines)+

*http://www.nhlbi.nih.gov/guidelines/cholesterol

+http://www.nhlbi.nih.gov/guidelines/hypertension

Therapy for Patients with HF and CAD

- Antiplatelet therapy is recommended in patients with HF and CAD unless contraindicated. (aspirin, Strength of Evidence = B; clopidogrel, Strength of Evidence = C)
- Angiotensin-converting enzyme (ACE) inhibitors are recommended in all patients with systolic dysfunction or preserved systolic function after a myocardial infarction (MI). (Strength of Evidence = A)
- Beta-blockers are recommended for the management of all patients with reduced left ventricular ejection fraction (LVEF) or post-myocardial infarction (Strength of Evidence = B)
- It is recommended that ACE inhibitor and beta-blocker therapy be initiated early (<48 hours) during hospitalization in hemodynamically stable post-myocardial infarction patients with left ventricular (LV) dysfunction or HF (Strength of Evidence = A)
- Nitrate preparations should be considered in patients with HF when additional medication is needed for relief of angina. (Strength of Evidence = B)
- Calcium channel blockers should be considered in patients with HF who have angina despite the optimal use of beta-blockers and nitrates. Amlodipine and felodipine are the preferred calcium channel blockers in patients with angina and decreased systolic function. (Strength of Evidence = C)
- It is recommended that coronary revascularization be performed in patients with HF and suitable coronary anatomy for relief of refractory angina or acute coronary syndrome. (Strength of Evidence = B)
- Coronary revascularization with coronary artery bypass surgery or percutaneous coronary intervention as appropriate should be considered in patients with HF and suitable coronary anatomy who have demonstrable evidence of myocardial viability in areas of significant obstructive coronary disease or the presence of inducible ischemia. (Strength of Evidence = C)

Definitions:

Strength of Evidence

Level A: Randomized, Controlled, Clinical Trials
May be assigned based on results of a single trial

Level B: Cohort and Case-Control Studies
Post hoc, subgroup analysis, and meta-analysis
Prospective observational studies or registries

Level C: Expert Opinion
Observational studies – epidemiologic findings
Safety reporting from large-scale use in practice

Strength of Recommendations

"Is recommended": Part of routine care
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"Should be considered": Majority of patients should receive the intervention. Some discretion in application to individual patients should be allowed.

"May be considered": Individualization of therapy is indicated

"Is not recommended": Therapeutic intervention should not be used

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations").

The recommendations are supported by randomized controlled clinical trials, cohort and case-control studies, and expert opinion.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Accurate evaluation and appropriate therapy for heart failure in the setting of ischemic heart disease

POTENTIAL HARMS

- Recent studies suggest that higher doses of aspirin may be associated with increases in drug interactions and bleeding, so 81 mg is recommended.

- Although all calcium antagonists have anti-ischemic properties, a meta-analysis of 16 trials that used immediate-release and short-acting nifedipine in patients with myocardial infarction (MI) and unstable angina reported a dose-related excess mortality.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

It must be recognized that the evidence supporting recommendations is based largely on population responses that may not always apply to individuals within the population. Therefore, data may support overall benefit of 1 treatment over another but cannot exclude that some individuals within the population may respond better to the other treatment. Thus guidelines can best serve as evidence-based recommendations for management, not as mandates for management in every patient. Furthermore, it must be recognized that trial data on which recommendations are based have often been carried out with background therapy not comparable to therapy in current use. Therefore, physician decisions regarding the management of individual patients may not always precisely match the recommendations. A knowledgeable physician who integrates the guidelines with pharmacologic and physiologic insight and knowledge of the individual being treated should provide the best patient management.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Pocket Guide/Reference Cards
Slide Presentation

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Heart Failure Society of America. Evaluation and therapy for heart failure in the setting of ischemic heart disease. J Card Fail 2006 Feb;12(1):e104-11. [113 references] PubMed

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1999 (revised 2006 Feb)

GUIDELINE DEVELOPER(S)

Heart Failure Society of America, Inc - Disease Specific Society

SOURCE(S) OF FUNDING

Heart Failure Society of America, Inc

GUIDELINE COMMITTEE

Comprehensive Heart Failure Practice Guideline Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Committee members and reviewers from the Executive Council received no direct financial support from the Heart Failure Society of America (HFSA) or any other

source for the development of the guideline. Administrative support was provided by the Heart Failure Society of America staff, and the writing of the document was performed on a volunteer basis by the Committee. Financial relationships that might represent conflicts of interest were collected for all members of the Guideline Committee and of the Executive Council, who were asked to disclose potential conflicts and recuse themselves from discussions when necessary. Current relationships are shown in Table 1.5 of the "Development and Implementation" companion document (see the "Availability of Companion Documents" field).

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GUIDELINE AVAILABILITY

Electronic copies: Available from the Heart Failure Society of America, Inc. Web site.

Print copies: Available from the Heart Failure Society of America, Inc., Court International - Suite 240 S, 2550 University Avenue West, Saint Paul, Minnesota 55114; Phone: (651) 642-1633

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Heart Failure Society of America. Executive summary: HFSA 2006 comprehensive heart failure practice guideline. J Card Fail 2006 Feb;12(1):10-38.
- Heart Failure Society of America. Development and implementation of a comprehensive heart failure practice guideline. J Card Fail 2006 Feb;12(1):e3-9.
- Heart Failure Society of America. Conceptualization and working definition of heart failure. J Card Fail 2006 Feb;12(1):e10-11.

  Electronic copies: Available from the Heart Failure Society of America, Inc. Web site.

- PowerPoint slides. HFSA 2006 comprehensive heart failure guideline.

  Electronic copies: Available from the Heart Failure Society of America, Inc. Web site.

The following is also available:

- Heart Failure Society of America. Pocket guide. HFSA 2006 comprehensive heart failure practice guideline.

Electronic copies: Not available at this time.

Print copies: Available from the Heart Failure Society of America, Inc., Court International - Suite 240 South, 2550 University Avenue West, Saint Paul, Minnesota 55114; Phone: (651) 642-1633

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on July 31, 2006. The information was verified by the guideline developer on August 10, 2006. This summary was updated by ECRI on March 6, 2007 following the U.S. Food and Drug Administration (FDA) advisory on Coumadin (warfarin sodium). This summary was updated by ECRI Institute on September 7, 2007 following the revised U.S. Food and Drug Administration (FDA) advisory on Coumadin (warfarin).

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