

Treating Heart Failure in Primary Care

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Hear failure is an important problem in primary care. The incidence of this disorder will continue to increase at an ever-alarming rate as our population ages. Family physicians need to be up to date on the evaluation and management of heart failure if they hope to ensure comprehensive continuity of care for their patients. In this issue of the *Journal*, James and colleagues¹ report the results of a retrospective chart review of more than 400 patients given a diagnosis of heart failure. I commend the authors for providing some much needed information in this area of primary care research.

James and coworkers report that patients being treated for heart failure in a primary care practice may differ in several ways from patients treated for heart failure in a cardiologist's office or in a hospital setting. Differences in patient age; associated comorbid conditions; functional status; and duration, severity, and type of heart failure require different management. The need clearly exists for a definition of the population of patients with heart failure who are primarily cared for by family physicians on an ongoing basis.

The results of this study also seem to suggest that the appropriate use of angiotensin-converting enzyme (ACE) inhibitors is likely to increase when physicians are well informed and motivated to give their patients with heart failure the best possible care. ACE inhibitor use in this study exceeded 90% for patients with a documented reduced ejection fraction and were cared for by clinicians voluntarily participating in a quality improvement project for heart failure. This figure greatly surpasses the percentage of patients with systolic dysfunction heart failure in other studies who were appropriately receiving this medication.

ESSENTIAL TESTS ARE NOT BEING PERFORMED

As promising as the high rate of appropriate ACE inhibitor use is among primary care clinicians in this study, the authors indicate that there is still a long way to go before we achieve optimal evaluation and management of heart failure in the primary care setting. Objective assessment of ventricular function was not obtained in 16% of patients in the study. Determination of the presence, type, and severity of heart failure cannot be made without this information. Assurance of optimal treatment is also not possible without the knowledge of left ventricular function and an assessment for under-

lying cardiac conditions that may otherwise be clinically occult (such as valvular disease with subtle auscultatory findings or hypertrophic cardiomyopathy). The need for a routine objective assessment of these factors is underscored by the finding that slightly more than half of all patients given a diagnosis of heart failure had a normal ejection fraction — presumably reflecting either heart failure with diastolic dysfunction or a clinical misdiagnosis of the cause of their symptoms.

Additional laboratory tests essential for diagnosis and optimal treatment were omitted in a significant percentage of the patients in this study: renal function assessment and a 12-lead electrocardiogram were not obtained in more than one quarter of the patients studied. Two thirds of the patients who were older than 65 years or had heart failure with atrial fibrillation did not have their thyroid function assessed within the 3 months preceding or following the diagnosis of heart failure. All of these tests should be routinely obtained for new-onset heart failure.

LIMITING METHODOLOGY

The principal drawback of the study by James and colleagues is its methodology: There is retrospective determination of data. Unfortunately, this shortcoming is inherent in the design of virtually any ambulatory study on heart failure, unless exceedingly large numbers of patients can be recruited and followed up over long periods to allow for prospective development of the disorder. Further complicating the process of early recognition and patient recruitment are the generally poor sensitivity and specificity of physical examination signs for heart failure, the inability of such signs to reliably distinguish between systolic and diastolic dysfunction, and a lack of consensus by experts on what the clinical definition of heart failure should be when echocardiographic assessment has not yet been obtained.²

Bedside clinical diagnosis of acute heart failure is easy. Detection of florid pulmonary edema can often be made without a stethoscope from across the room. But because of lymphatic compensation (providing a channel for interstitial fluid drainage), pulmonary rales are heard in fewer than 25% of patients who present to the office with a less acute picture.³ Even when they are heard, the distinction between rales that represent heart failure and those that reflect pulmonary fibrosis may not be readily apparent. Other physical examination signs commonly associated with heart failure are either nondiagnostic when they occur in isolation (pedal edema) or subject to clinician ability to reliably detect the finding (eg, S₃ gallop, jugular venous distension, abdominojugular reflux).^{4,5}

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QUESTIONS FOR FURTHER STUDY

Despite these concerns, the results of the study by James et al are encouraging. Once the diagnosis of heart failure has been objectively confirmed, the treatment rate with pharmacologic agent of choice—ACE inhibitors—is high. However, many questions remain about the management of heart failure and the quality of care that can be provided by primary care physicians. Are ACE inhibitors truly the drugs of choice for all patients with heart failure or only for those with systolic dysfunction? Are angiotensin-receptor blockers comparable with ACE inhibitors in regard to the beneficial effects they produce? Does one or both of these agents reverse ventricular hypertrophy in the group of patients with heart failure from pure diastolic dysfunction? Should ACE inhibitors and angiotensin-receptor blockers be combined for optimal management of patients with more severe heart failure?

Future studies should explore the role of other drugs in the management of patients with heart failure. Quality of care assessment will need to await determination of optimal treatment regimens. Recent developments call into question standard practice.⁶ For example, there is no consensus on whether digoxin is still indicated for patients in sinus rhythm with systolic dysfunction heart failure. Should patients with systolic dysfunction heart failure now be started routinely on β -blockers? And if so, at what point in the evolution of the disease? Should β -blockers be added early (ie, for patients with class I or class II heart failure and only minimal symptoms), or should they only be used as a

last resort after ACE inhibitors, diuretics, and digoxin have all been tried? And, most recently, the question has been raised whether spironolactone should now be added to the regimen for treatment of heart failure as an adjunctive mortality-reducing measure, in an attempt to further inhibit aldosterone (beyond the effect produced by ACE inhibition) and maintain optimal electrolyte balance (potassium- and magnesium-retaining action).⁶

Family physicians play a major role in recognizing the early signs and symptoms of heart failure, and providing continuity of care. The article by James and colleagues represents a beginning of the accumulation of data and assessment of quality control in the management of heart failure in primary care. Further work in the ambulatory primary care setting is now needed as we search for more answers.

REFERENCES

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TIPS FROM PRACTICE

COLLECTING A STOOL SPECIMEN

Collecting a stool specimen can be a challenge. Neither fishing the stool out of the toilet nor depositing it directly in the stool cup is very appealing to the patient or the staff.

Using Saran Wrap to collect the specimen is a very acceptable alternative. Pull out approximately 10 inches more from the roll than you would need to go from one side of the toilet bowl to the other. Drape it over the bowl so that it creates a hammock effect. Lower the seat.

After the patient has a bowel movement, if urine is captured along with the stool, poke a hole in the plastic to allow the urine to drain. Then lift the lid, pick up the 2 ends of the Saran Wrap, and wrap up the stool. The package can then be placed in a paper bag or stool cup for

transport to the laboratory.

No smell, no mess.

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TUNING FORKS PICK UP SMALL AMOUNTS OF FLUID IN SERIOUS OTITIS MEDIA

If there is no tympanography machine available, a Weber test performed with a 256-Hz C tuning fork may pick up small amounts of fluid in patients with serious otitis media. The patient will report that the sound in the ear with fluid appears to be louder.

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