

American Journal of Hospice and Palliative Medicine®

<http://ajh.sagepub.com>

Palliation in heart failure: When less and more are more

Paul J. Hauptman

Am J Hosp Palliat Care 2006; 23; 150

DOI: 10.1177/104990910602300212

The online version of this article can be found at:

<http://ajh.sagepub.com>

Published by:



<http://www.sagepublications.com>

Additional services and information for *American Journal of Hospice and Palliative Medicine*® can be found at:

Email Alerts: <http://ajh.sagepub.com/cgi/alerts>

Subscriptions: <http://ajh.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.com/journalsPermissions.nav>

Citations <http://ajh.sagepub.com/cgi/content/refs/23/2/150>

Pain and symptom management

Palliation in heart failure: When less and more are more

Paul J. Hauptman, MD

Introduction

The aging of the population, increasing prevalence of risk factors for congestive heart failure among older persons, and high mortality rates, especially for patients in advanced symptoms according to the standardized New York Heart Association classification,¹⁻³ have focused attention on the need to devise strategies to evaluate and manage patients with progressive and chronic cardiac failure. This clinical challenge is highlighted by the fact that, despite increasing use of drugs closely associated with improved outcomes (ACE inhibitors and β -adrenergic antagonists),^{4,5} morbidity and mortality have not changed demonstrably for patients once signs and symptoms of advanced disease develop.⁶ Further, clinical trials in heart failure have not uniformly enrolled elderly patients,^{7,8} thereby potentially

limiting our ability to broadly generalize about the applicability of standard therapies to all age groups.

Indeed, many options do not apply to the vast majority of patients with severe symptomatic disease. Cardiac transplantation is limited in number and by age restrictions (usually 65 years); the volume of these procedures performed on an annual basis in the United States has not increased in recent years.⁹ Selection of destination therapy with a left ventricular assist device remains limited by the technical expertise required, exorbitant costs, access, and limited survival advantage.¹⁰ Further, it is an option that is applicable to patients within a relatively limited age range and/or with comorbidities that are not thought to be severe enough to limit survival. It seems unfathomable that older septuagenarians or octogenarians would be candidates for or select for themselves such dramatic therapy. Biventricular pacemakers ("resynchronization therapy") can be offered to a larger population but uncertainties remain, including appropriate patient

selection, sustainability of response, and overall survival benefit.¹¹

Given the complexities and limitations of therapeutic options, a key component of care in advanced heart failure involves the assessment of patient preferences and, in that context, recognition that age is an extremely important factor in any evaluation of the impact of heart failure on patients' lives. We and others^{12,13} have shown that after controlling for key variables such as New York Heart Association class and distance traversed on a six-minute walk test, older patients report better health-related quality of life than younger patients. As Masoudi et al. noted, "Physician estimates of older patients' HRQL, which may be largely based on functional status, are known to overestimate the true impact of disease on a patient ... the acceptance of functional status as a surrogate for HRQL in an older patient with HF could result in an inappropriately pessimistic assessment of a patient's experience of their condition."¹³

Comfortable options exist, of

Paul J. Hauptman, MD, Division of Cardiology, Department of Medicine, Saint Louis University School of Medicine, St. Louis, Missouri.

course: palliative and comprehensive care teams and disease management approaches^{14,15} focus on early identification of symptoms, care coordination, and monitoring outside the hospital setting. A major limiting factor in the wider adoption of these options has been the cost, which reflects inequities within a payment system that favors reimbursement for acute episodic care and invasive procedures over chronic care.

The use of chronic continuous intravenous inotropes represents one pharmacological alternative for patients who have failed conventional measures and has been rated as a class IIb (“usefulness/efficacy is less well established by expert opinion”) indication based on consensus opinion of experts according to the guidelines of the American College of Cardiology/American Heart Association.¹⁶ While intravenous inotropic therapy can lead to a meaningful improvement in symptoms of low cardiac output syndrome, there are in fact no randomized single- or double-blinded studies to support wide adoption of this approach. Inotropes may very well represent a therapy that improves symptoms, appetite, and function but, given the potential for proarrhythmia, possibly hasten the patient’s death.¹⁷ While used and partially reimbursed in the Medicare population,¹⁸ inotropic drugs are often not considered appropriate in hospice. A large part of that bias relates to the cost associated with chronic intravenous infusions rather than a misunderstanding of the role these drugs play in the management of end-stage heart failure patients.¹⁹

For patients with stage D heart failure for whom hospice is a realistic option,¹⁶ one problem appears to be uncertainty about the timing of referral on the part of physicians. To some degree, this situation is compounded by the lack of a disease-specific approach to heart failure and limited

formal training in heart failure as reported by medical directors of hospice programs.²⁰

Perhaps no greater example of the ethical challenges that exist for the clinician in the care of the end-stage heart failure patient can be found in the management decisions related to implantable cardioverter-defibrillators (ICDs). Indeed, while the ICD may change the natural history of heart failure when patients are not experiencing worsening signs and symptoms of congestion and pump failure,^{21,22} the same cannot be said when the patient develops manifestations of significant pump dysfunction. What to do, then, with the patient who has stage D failure? The misfortune of defibrillator discharge during the terminal stages of life is now documented.²³ Therefore, I would advocate a rather simple approach, involving two forms of device deactivation. First, passive deactivation can be considered when a device is near end of life from battery depletion. The practitioner, in consultation with patient and family, should not advocate or promote the placement of a new generator. Second, active deactivation should be pursued when the patient and physician have chosen an exclusively palliative approach to care. Nevertheless, the question arises about who should take the initiative in discussing these options with the patient. In unpublished data from a national pilot survey, we found that the majority of respondents in the disciplines of internal medicine, family practice, and geriatrics have had no experience with or discussions about ICD deactivation. These preliminary data point to a knowledge deficit that will need to be addressed.

A final dilemma pertains to measurement of quality in advanced HF care. What, specifically, would reflect quality, and how can it be measured? To what degree should the pharmacologic component of a palliative treatment plan for heart failure focus on

the disease-specific symptoms of fluid overload and poor end-organ perfusion, and to what degree can there be overlap with the treatment of other chronic debilitating and fatal conditions? I would advocate formal study in this area to encourage the best that palliative care can deliver.

In summary, when selecting care options for heart failure patients who are failing conventional pharmacological management, less and more may be more: fewer defibrillators but more consideration of deactivation, less focus on survival but more emphasis on therapies that palliate such as inotropic therapy, fewer invasive procedures but more focus on correction of easily identifiable precipitants of worsening congestion, less proscriptive care but more interest in understanding patient preferences and the impact of the disease on quality of life. It has been eight years since heart failure data were presented from the SUPPORT study.^{24,25} Perhaps it is time to see if we have learned anything in the interim.

References

1. Croft JB, Giles WH, Pollard RA, et al.: Heart failure survival among older adults in the United States. *Arch Int Med.* 1999; 159: 505-510.
2. Ho KKL, Anderson KM, Kannel WB, et al.: Survival after the onset of congestive heart failure in Framingham Heart Study subjects. *Circulation.* 1993; 107-115.
3. Gillum RF: Epidemiology of heart failure in the United States. *Am Heart J.* 1993; 126: 1042-1047.
4. Flather MD, Yusuf S, Køber L, et al.: Long-term ACE inhibitor therapy in patients with heart failure or left ventricular dysfunction: A systematic overview of data from individual patients. *Lancet.* 2000; 355: 1575-1581.
5. Metra M, Nodari S, D’Aloia A, et al.: A rationale for the use of beta-blockers as standard treatment for heart failure. *Am Heart J.* 2000; 139: 511-521.
6. Baker DW, Einstadter D, Thomas C, et al.: Mortality trends for 23,505 Medicare

- patients hospitalized with heart failure in northeast Ohio, 1991-1997. *Am Heart J*. 2003; 146: 258-264.
7. Heiat A, Gross CP, Krumholz HM: Representation of the elderly, women and minorities in heart failure clinical trials. *Arch Int Med*. 2002; 162: 1682-1688.
8. Masoudi FA, Havranek EP, Wolf P, et al.: Most hospitalized older persons do not meet the enrollment criteria for clinical trials in heart failure. *Am Heart J*. 2003; 146: 250-257.
9. Hosenpud J: Immunosuppression in cardiac transplantation. *N Engl J Med*. 2005; 352: 2749-2750.
10. Rose E, Gelijns A, Moskowitz A: Long term mechanical left ventricular assistance for end-stage heart failure. *N Engl J Med*. 2001; 345: 1435-1443.
11. Mehra M, Greenberg B: Caveat medicus! *J Am Coll Cardiol*. 2004; 43: 1145-1148.
12. Hauptman PJ, Rector T, Wentworth D, et al.: Quality of life in advanced heart failure: Role of mitral regurgitation. *Am Heart J*. in press. 2006; 151: 213-218.
13. Masoudi FA, Rumsfeld JS, Havranek EP, et al.: Age, functional capacity and health related quality of life in patients with heart failure. *J Card Fail*. 2004; 10: 368-373.
14. Rabow MW, Dibble SL, Pantilat SZ, et al.: The Comprehensive Care Team: A randomized trial of outpatient palliative medicine consultation. *Arch Int Med*. 2004; 164: 83-91.
15. Hauptman PJ, Havranek EP: Integrating palliative care into heart failure care. *Arch Int Med*. 2005; 165: 374-378.
16. Hunt SA, Baker DW, Chin MH, et al.: ACC/AHA guidelines for the evaluation and management of chronic heart failure in the adult: A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. Available at: http://www.acc.org/clinical/guidelines/failure/hf_index.htm.
17. Ewy GA: Inotropic infusions for chronic congestive heart failure: Medical miracles or misguided medicinals? *J Am Coll Cardiol*. 1999; 33: 572-575.
18. Mikolajczak P, George A, Oliver D, et al.: Preliminary economic analysis of chronic continuous home inotropic therapy in end-stage heart failure: Insights from a multi-state Medicare database. *J Card Fail*. 2004; 10: S109.
19. Rich MW, Shore BL: Dobutamine for patients with end-stage heart failure in a hospice program. *J Palliat Med*. 2003; 6: 93-97.
20. Kutner J, Goodlin SJ, Connor SR, et al.: Hospice care for heart failure patients. *J Pain Sympt Mgmt*. 2005; 29: 525-528.
21. Moss AJ, Zareba W, Hall WJ, et al.: Prophylactic implantation of a defibrillator in patients with myocardial infarction and reduced ejection fraction. *N Engl J Med*. 2002; 346: 877-883.
22. Bardy GH: Amiodarone or implantable cardioverter defibrillator for congestive heart failure. *N Engl J Med*. 2005; 352: 225-237.
23. Goldstein NE, Lampert R, Bradley E, et al.: Management of implantable cardioverter defibrillators in end-of-life care. *Ann Intern Med*. 2004; 141: 835-838.
24. Jaagosild P, Dawson NV, Thomas C, et al. for the SUPPORT Investigators: Outcomes of acute exacerbation of severe congestive heart failure: Quality of life, resource use and survival: The Study to Understand Prognosis and Preferences for Outcomes and Risks of Treatment. *Arch Int Med*. 1998; 158: 1081-1089.
25. Krumholz HM, Phillips RS, Hamel MB, et al., for the SUPPORT Investigators: Resuscitation preferences among patients with severe congestive heart failure: Results from the SUPPORT project. *Circulation*. 1998; 98: 648-655.