Improved Survival after Heart Failure: A Community-based Perspective

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Repository Citation
Webster, Kristy T.; Joffe, Samuel W.; McManus, David D.; Kiernan, Michael S.; Lessard, Darleen M.; Yarzebski, Jorge L.; Darling, Chad E.; Gore, Joel M.; and Goldberg, Robert J., "Improved Survival after Heart Failure: A Community-based Perspective" (2013). University of Massachusetts Medical School. Senior Scholars Program. Paper 149.
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Improved Survival after Heart Failure: A Community-based Perspective

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Comments
Medical student Kristy Webster participated in this study as part of the Senior Scholars research program at the University of Massachusetts Medical School.

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Introduction

- Heart failure (HF) is a highly prevalent, morbid, and costly disease with a poor long-term prognosis
- HF affects more than 6.6 million Americans and causes more than 275,000 deaths annually
- Evidence-based therapies utilized over the past 2 decades hold the promise of improved outcomes, yet few contemporary studies have examined survival trends in patients with acute decompensated heart failure (ADHF)

Objectives

- The primary objective of this population-based study was to describe trends in short and long-term survival in patients hospitalized with ADHF
- A secondary objective was to examine patient characteristics associated with decreased long-term survival

Methods

- We reviewed the medical records of 9,748 patients hospitalized with ADHF at all 11 medical centers in central Massachusetts during 1995, 2000, 2002, and 2004
- Information on patient’s demographic, clinical, and treatment characteristics was analyzed using standard methods, including multivariable regression
- Mortality was assessed by reviewing statewide death certificates, the Social Security Death Index, and hospital medical records at participating medical centers

Evidence-Based Rx has Increased

- Some Rx use has increased markedly over time
- Evidence-based therapies utilized over the past 2 decades hold the promise of improved outcomes, yet few contemporary studies have examined survival trends in patients with acute decompensated heart failure (ADHF)

Conclusions

- Patients with ADHF were increasingly elderly and had multiple comorbidities associated with poor outcomes
- Both short and long-term survival for these patients improved significantly between 1995 and 2004, but their long-term prognosis remains poor, as fewer than 1 in 3 patients hospitalized with ADHF in 2004 survived more than 5 years
- While there has been encouraging progress in the treatment and prognosis of patients hospitalized with ADHF, additional opportunity remains to improve the in-hospital and post-discharge management of patients with this common and debilitating clinical syndrome

In-hospital and 30-day Mortality have Decreased

- In-hospital mortality decreased from 8.5% to 6.8% between 1995 and 2004
- 30-day post-discharge mortality decreased from 8.4% to 7.1% between 1995 and 2004

Factors Associated with Post-Discharge Mortality

Long Term Survival Improving, but Still Poor

- Long-term survival has improved, but remains poor
- Survival rates among patients who survived the initial hospitalization decreased from 8.5% to 6.8% between 1995 and 2004

#### Evidence-Based Rx has Increased

<table>
<thead>
<tr>
<th>Rx Class</th>
<th>Total Population (%)</th>
<th>1995 Cohort (%)</th>
<th>2004 Cohort (%)</th>
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<tbody>
<tr>
<td>Diuretics</td>
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<tr>
<td>ACE/ARB</td>
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<td>Statins</td>
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<td>Nitrates</td>
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<td>CCB's</td>
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<tr>
<td>Beta Blockers</td>
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<tr>
<td>Statin and Aldo Antagonist</td>
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<tr>
<td>B-Blockers</td>
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</tbody>
</table>

#### Factors Associated with Post-Discharge Mortality

- Older age, male sex, prior HF, chronic kidney disease, COPD, diabetes, peripheral vascular disease, anemia, and stroke were associated with poor long-term survival

#### Conclusions

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