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.

This poster is available at eScholarship@UMMS: https://escholarship.umassmed.edu/ssp/149
**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 two 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**

(\% of patients receiving medication upon discharge)

<table>
<thead>
<tr>
<th>Medical History (%)</th>
<th>1995 Cohort</th>
<th>2004 Cohort</th>
<th>Hazard Ratio</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coronary Heart Disease</td>
<td>56.0</td>
<td>57.0</td>
<td>1.00</td>
<td>0.76</td>
</tr>
<tr>
<td>Hypertension</td>
<td>68.7</td>
<td>62.3</td>
<td>0.93</td>
<td>0.06</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease</td>
<td>35.9</td>
<td>35.5</td>
<td>0.97</td>
<td>0.86</td>
</tr>
<tr>
<td>Diabetes</td>
<td>14.3</td>
<td>14.1</td>
<td>0.98</td>
<td>0.89</td>
</tr>
<tr>
<td>Anemia</td>
<td>24.6</td>
<td>21.9</td>
<td>0.89</td>
<td>0.09</td>
</tr>
<tr>
<td>Peripheral vascular disease</td>
<td>19.7</td>
<td>20.2</td>
<td>1.04</td>
<td>0.71</td>
</tr>
<tr>
<td>Stroke</td>
<td>13.2</td>
<td>14.3</td>
<td>1.09</td>
<td>0.38</td>
</tr>
<tr>
<td>Total Population</td>
<td>n=9,748</td>
<td>n=9,748</td>
<td></td>
<td></td>
</tr>
</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**

- 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.