WOMEN DERIVE GREATER BENEFIT FROM EARLY MECHANICAL CIRCULATORY SUPPORT: AN UPDATE FROM THE USPELLA REGISTRY

Poster Contributions
Poster Hall B1
Sunday, March 15, 2015, 3:45 p.m.-4:30 p.m.

Session Title: Procedural, Pharmacologic and Device Therapy for ACS
Abstract Category: 3. Acute Coronary Syndromes: Therapy
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Background: Sex differences in outcome with mechanical circulatory support are sparse. We aimed to assess sex differences with use of the Impella 2.5 in the setting of cardiogenic shock (CS) complicating acute myocardial infarction (AMI).

Methods: Data from 211 consecutive patients enrolled at 43 hospitals from Dec 2007 to 2013 in the USpella registry who underwent percutaneous coronary intervention (PCI) and Impella 2.5 support were reviewed, and gender differences were analyzed.

Results: Of 211 patients, 60 (28%) were women. Women were older (70.0±12.2 vs 64.0±12.4, p=0.002), smaller (BSA 1.88 vs 2.06m², p<0.0001), had a higher prevalence of diabetes (59.3% vs 44.4% p=0.05) and higher predicted risk of mortality than man (STS mortality score 29.7±13.4 vs. 24.2±11.9 p=0.01). There was no sex specific difference in survival to discharge (49.7% men vs. 48.3% women, p=0.86). Patients who received Impella 2.5 support pre-PCI had lower inpatient mortality than those who received support post-PCI. This survival benefit was significantly greater in women who received the Impella pre-PCI compared to men (75.0% vs 30.6%, Figure).

Conclusion: Although women were older and had higher predicted risk of mortality than men, they experienced similar survival with use of Impella 2.5 for CS and AMI. The survival benefit associated with early initiation of hemodynamic support prior to PCI was greater in women compared to men. Additional investigation is warranted to validate this finding and understand the mechanism.

Survival to Discharge by Gender
(N = 211)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Pre-PCI</th>
<th>Post-PCI</th>
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<tbody>
<tr>
<td>Male</td>
<td>49.7%</td>
<td>48.3%</td>
</tr>
<tr>
<td>Female</td>
<td>75.0%</td>
<td>30.6%</td>
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P=0.06 (N=151)

P<0.001 (N=80)