Prognostic impact of mineralocorticoid receptor antagonists in patients hospitalized for acute heart failure

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On behalf: the KCHF Registry Investigators

Topic(s):
Acute Heart Failure: Pharmacotherapy

Citation:
Background: The favourable effect of mineralocorticoid receptor antagonists (MRAs) on mortality was established in patients with stable heart failure (HF) with reduced ejection fraction (EF). However, its prognostic effect of MRAs in acute decompensated heart failure (ADHF) including HF with preserved EF (HFpEF) was unclear.

Purpose: This study sought to investigate the long-term impact of MRA on the post-discharge outcomes in patients with ADHF.

Methods: From the consecutive 3717 patients hospitalized for ADHF and discharged alive in the KCHF registry, we developed the propensity score (PS) for MRA use and constructed the PS-matched cohort. We compared the effect of MRA use on the primary outcome measure of all-cause death or HF hospitalization.

Results: A total of 1678 patients (45%) received MRA at discharge from the index hospitalization. Median follow-up was 470 days with 96% 1-year follow-up rate. In the PS-matched cohort (N = 1034 in each group), the cumulative 1-year incidence of the primary outcome measure was significantly lower in the MRA group than in the no MRA group (28.4% vs. 33.9%, P = 0.003) (Figure 1). The cumulative 1-year incidence of HF hospitalization was significantly lower in the MRA group than in the no MRA group (18.7% vs. 24.8%, P <0.001), while there was no difference in mortality between the 2 groups (15.6% vs. 15.8%, P = 0.85). There was no interaction between the effect of MRA and the 3 subgroups stratified by EF (EF <40%, EF 40–49%, EF =50%) (interaction P = 0.12).

Conclusion: The use of MRA was associated with lower risk for the primary composite outcome of all-cause death or HF hospitalization in patients hospitalized for ADHF including HFpEF, which was mainly driven by the lower risk for HF hospitalization.
Abstract:
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Death or HF hospitalization

Log-rank P=0.003

<table>
<thead>
<tr>
<th>Interval</th>
<th>0 Day</th>
<th>30 Days</th>
<th>180 Days</th>
<th>1 Year</th>
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</thead>
<tbody>
<tr>
<td><strong>No MRA</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of patients with at least one event</td>
<td>63</td>
<td>212</td>
<td>344</td>
<td>452</td>
</tr>
<tr>
<td>N of patients at risk</td>
<td>1034</td>
<td>907</td>
<td>807</td>
<td>589</td>
</tr>
<tr>
<td>Cumulative incidence</td>
<td>6.1%</td>
<td>20.9%</td>
<td>33.9%</td>
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<tr>
<td><strong>MRA</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>N of patients with at least one event</td>
<td>54</td>
<td>163</td>
<td>267</td>
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</tr>
<tr>
<td>N of patients at risk</td>
<td>1034</td>
<td>979</td>
<td>846</td>
<td>666</td>
</tr>
<tr>
<td>Cumulative incidence</td>
<td>5.2%</td>
<td>16.0%</td>
<td>28.4%</td>
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</tbody>
</table>