

Use and Safety of Aldosterone Blockers in Patients with Left Ventricular Dysfunction in ACSIS Survey

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Background: The landmark EPHESUS trial, showed that treatment with the selective aldosterone blocker eplerenone is associated with a significant reduction in morbidity and mortality among patients with acute myocardial infarction (AMI) complicated by left ventricular dysfunction and heart failure. We sought to assess the implementation of this indication in a real world setting among patients enrolled in the ACSIS surveys.

Methods: The study population comprised 955 patients from ACSIS 2004-2010 who met the guideline criteria for treatment with aldosterone blockers including Killip class II or III on admission, serum creatinine ≤ 2.4 mg/dL, and left ventricular ejection fraction (LVEF) $\leq 40\%$.

Results: Among 7,696 patients enrolled in the ACSIS surveys from 2004, 955 (12%) were identified as eligible for treatment with an aldosterone blocker, meeting the above mentioned criteria. In this population treatment with an aldosterone blocker showed a modest increase from 19% to 27% over the six year period, whereas utilization of other recommended medications in this population was >2 -fold higher (Figure 1). The underutilization of aldosterone blockers was consistent among all participant centers. Multivariate logistic regression analysis showed that independent predictors of aldosterone blocker under-utilization included LVEF 30-40% vs. $<30\%$ (adjusted OR = 1.89 [95% CI 1.30-2.78]); Killip class II vs. III on admission (adjusted OR = 2.46 [95% CI 1.71-3.53]); and prior CVA (adjusted 2.78 [95% CI 1.35-5.88]), whereas serum creatinine was not significantly different between eligible patients who did or did not receive an aldosterone blocker. Aldosterone-blocker administration was not associated with an increased rate of in-hospital complications or re-hospitalization following discharge.

Conclusions: Less than one third of AMI patients who are eligible for treatment with an aldosterone blocker according to current guidelines receive this mode of medical therapy.

