Eplerenone in Patients With Acute Myocardial Infarction Complicated by Heart Failure

To the Editor:

Pitt et al have concluded in their study that eplerenone should be prescribed to all of the postacute myocardial infarction patients with reduced left ventricular ejection fraction and heart failure. However, there are a few concerns in using eplerenone in certain populations.

During the development of heart failure, there is an activation of the renin-angiotensin-aldosterone system. This leads to the use of angiotensin-converting enzyme inhibitors as a core treatment modality for heart failure. In the late 1990s, the Randomized Aldactone Evaluation Study showed that the aldosterone receptor antagonist spironolactone decreased rehospitalization attributable to heart failure by 35%. The same authors noted reduced cardiovascular mortality in postmyocardial infarction patients when using eplerenone in the Eplerenone Post-Acute Myocardial Infarction Heart Failure Efficacy and Survival Study. These studies increased the prescription of aldosterone receptor antagonists and led to an increase in the incidence of hospitalizations attributable to hyperkalemia, especially in the elderly. This was particularly seen in patients with left ventricular ejection fraction <20%, on potassium supplements and concomitant usage of diuretics, along with lack of renal function monitoring. These episodes are also more frequent in patients with creatinine clearance <50 mL/min. In the United States, ~7.5 million elderly patients have creatinine clearance <60 mL/min. Renal function calculated using serum creatinine is misleading in elderly because of their decreased muscle mass. This is clearly evident in one of the reviews that actually showed a calculated glomerular filtration rate of <30 mL/min in patients with a baseline creatinine ≤1.8, who were prescribed aldosterone receptor antagonists. Therefore, the important message pertaining to elderly postmyocardial infarction patients is that glomerular filtration rate should be calculated before treating with eplerenone, because the drug may do more harm than benefit if not selectively prescribed.

Disclosures

None.

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