

USE OF RENIN ANGIOTENSIN ALDOSTERONE SYSTEM  
BLOCKADE (RAASB) MAY BE BENEFICIAL IN PATIENTS  
WITH ACUTE KIDNEY INJURY (AKI): C. Suarez-Fuentes, K.Rausa,  
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RAASB has protective effects in patients with diabetic nephropathy and congestive heart failure (CHF). Animal models suggest that RAAS inhibition has renoprotective effects on ischemic AKI. Exposure to RAASB is associated with AKI in hospitalized patients and early discontinuation is recommended. Based on animal data, we hypothesized that exposure to RAASB has a protective effect in patients with hospital acquired AKI.

Medical records were obtained for all patients admitted between 2008 and 2010 at Montefiore Medical Center. AKI was defined as a 50% increase in serum creatinine over a pre-admission value and mortality data was collected via linkage to the Social Security Death Index.

There were 46,580 admissions meeting our eligibility criteria. 2,104 patients developed AKI (5%) and 33% had exposure to RAASB. Those developing AKI were more likely to have higher Charlson scores (2.3 versus 2.0,  $p=0.001$ ), diabetic complications (5.8% versus 4.4%,  $p<0.001$ ) or an eGFR that was less than 60 ml/min/1.73 m<sup>2</sup> (37% versus 22%  $p<0.001$ ). RAASB was not associated with a higher risk of developing AKI (OR 0.95, 95% CI 0.85, 1.07). In a multivariable model, patients who developed AKI had higher risk of mortality (OR 1.37, 95% CI 1.16, 1.60). Patients that had exposure to RAASB had a lower risk of mortality overall compared to patients who did not receive RAASB (OR 0.72, 95% CI 0.66, 0.78) independent of AKI status. We identified 653 patients who developed AKI and were on RAASB. Of these, 306 patients were continued on the RAASB and 51 died (17%) while RAASB was discontinued in 347 patients and 72 (21%) died ( $p=0.18$ ).

Hospital acquired AKI is common and has a high risk of mortality. Our data suggest that RAASB did not increase the risk of AKI in hospitalized patients and RAASB in hospitalized patients was associated with a lower risk of mortality. Studies are needed to examine whether stopping RAASB upon the development of AKI has an effect on mortality and severity of AKI outcomes.