Renin-angiotensin inhibition in diastolic heart failure and chronic kidney disease.

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Abstract

**BACKGROUND:** The role of renin-angiotensin inhibition in older patients with diastolic heart failure and chronic kidney disease remains unclear.

**METHODS:** Of the 1340 patients (age ≥65 years) with diastolic heart failure (ejection fraction ≥45%) and chronic kidney disease (estimated glomerular filtration rate <60 mL/min/1.73 m(2)), 717 received angiotensin-converting enzyme inhibitors or angiotensin receptor blockers. Propensity scores for the use of these drugs, estimated for each of the 1340 patients, were used to assemble a cohort of 421 pairs of patients, receiving and not receiving these drugs, who were balanced on 56 baseline characteristics.

**RESULTS:** During more than 8 years of follow-up, all-cause mortality occurred in 63% and 69% of matched patients with chronic kidney disease receiving and not receiving angiotensin-converting enzyme inhibitors or angiotensin receptor blockers, respectively (hazard ratio [HR], 0.82; 95% confidence interval [CI], 0.70-0.97; P = .021). There was no association with heart failure hospitalization (HR, 0.98; 95% CI, 0.82-1.18; P = .816). Similar mortality reduction (HR, 0.81; 95% CI, 0.66-0.995; P = .045) occurred in a subgroup of matched patients with an estimated glomerular filtration rate less than 45 mL/min/1.73 m(2). Among 207 pairs of propensity-matched patients without chronic kidney disease, the use of these drugs was not associated with...
CONCLUSIONS: A discharge prescription for angiotensin-converting enzyme inhibitors or angiotensin receptor blockers was associated with a significant reduction in all-cause mortality in older patients with diastolic heart failure and chronic kidney disease, including those with more advanced chronic kidney disease.

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