Benazepril-Amlodipine Reduces Cardiovascular Risk in High-Risk Patients

For high-risk patients with hypertension, benazepril plus amlodipine offers greater protection against cardiovascular events than benazepril-hydrochlorothiazide—despite similar effects on blood pressure, according to a report in The New England Journal of Medicine.

The industry-funded ACCOMPLISH trial included 11,506 patients with hypertension and a history of or risk factors for cardiovascular events. One group received the angiotensin-converting enzyme inhibitor benazepril plus the calcium-channel blocker amlodipine. The other group received benazepril plus the thiazide diuretic hydrochlorothiazide. Patients were followed up for a composite end-point of cardiovascular death, nonfatal myocardial infarction or stroke, hospitalization for angina, resuscitation after sudden cardiac arrest, and coronary revascularization.

The study was stopped early after 36 months. There was no more than a 1 mm Hg difference in systolic blood pressure between groups. However, the primary outcome rate was 9.6 percent with benazepril-amlodipine versus 11.8 percent with benazepril-hydrochlorothiazide, with a hazard ratio of 0.80. The benazepril-amlodipine group had a similar reduction in a composite endpoint of cardiovascular death, nonfatal myocardial infarction, and nonfatal stroke.

Good Outcomes with Sirolimus Combinations in High-Risk Transplant Recipients

Sirolimus, given with either tacrolimus or cyclosporine, provides good one-year efficacy in high-risk renal allograft recipients, reports a trial in Transplantation.

The randomized, open-label, multicenter trial included 448 renal allograft recipients with risk factors for rejection: black race, nonprimary transplant, or high panel-reactive antibodies. They were assigned to sirolimus plus tacrolimus or sirolimus plus cyclosporine.

One-year efficacy failure rates were 22 percent with sirolimus-tacrolimus and 25 percent with sirolimus-cyclosporine. Adverse reactions were 14 percent and 17 percent, respectively; graft survival was 90 percent in both groups. In patients receiving their assigned therapy, the glomerular filtration rate tended to be higher with sirolimus-tacrolimus.

Other one-year outcomes were similar between groups. Sirolimus-tacrolimus was associated with higher rates of diarrhea and herpes simplex. Other adverse events were more frequent with sirolimus-cyclosporine, including hypertension, calcineurin inhibitor toxicity, and increased creatinine.

It has been difficult to perform randomized trials evaluating outcomes in high-risk renal allograft recipients. This industry-sponsored study shows "equivalent benefit or risk" with the two sirolimus combinations studied, with no clear advantage of one regimen over the other (Gaber AO, Kahan BD, Van Bogaert C, Schulten SL, Scarola J, and Neytan JE, for the Sirolimus High-Risk Study Group: Comparison of sirolimus plus tacrolimus versus sirolimus plus cyclosporine in high-risk renal allograft recipients: results from an open-label, randomized trial. Transplantation 2008; 86:1187–1195).

CKD in Children

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mation that can ultimately contribute to decreasing the progressive impairment of kidney function in those with chronic kidney disease or lessen the morbidity associated with the disorder is extremely important to the health of children.

In addition to Wong’s research, other investigations based on data from the CKD study have uncovered useful information about kidney disease in children. One recent analysis found that hemoglobin declines as glomerular filtration rate decreases in these patients. These results indicate that clinicians should be mindful of the potential for hemoglobin decline and anemia even at early stages of chronic kidney disease.

Another project has characterized the distribution of blood pressure and the prevalence and risk factors for hypertension in pediatric chronic kidney disease patients. Researchers found that characteristics associated with elevated blood pressure included black race, shorter duration of chronic kidney disease, absence of antihypertensive medication use, and elevated serum potassium.

Such research efforts will help shape the future of kidney disease care in the United States. “Challenges for these and other investigators in the future are to design studies that directly engage in manipulation of modifiable factors such as RAS interventions, diet, body mass index, and other therapies to promote best retention of renal function in children with chronic kidney disease,” Mahan said.