Renal, Heart Failure Respond to Same Therapies

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VANCOUVER, B.C. — Chronic kidney disease and heart failure often go hand in hand, and the treatment strategy is similar for both. But there are some finer points to treating patients who have both conditions, according to Dr. Michael Copland, a nephrologist at Vancouver General Hospital.

In patients with cardiorenal syndrome, cardiac and renal dysfunction synergistically amplify each other. The end result is a sharply elevated rate of cardiovascular events. In general, 44% of deaths among patients with chronic kidney disease are due to cardiovascular causes, Dr. Copland said at the annual Canadian Hospitalist Conference.

For patients with kidney disease and heart failure, focus on diet and lifestyle changes, and control of hypertension, diabetes, and lipids. "These are all very cardiovascular-sounding items, but each of these items carries with it a survival benefit in terms of kidney protection for this group of people," he said.

Renoprotective measures include angiotensin-converting enzyme inhibitors and angiotensin II receptor blockers (ARBs). "We should be doing our best to get all of our patients on ACE inhibitors and ARBs if they have impaired renal function—particularly if they are diabetic, particularly if they have protein in their urine—because that … is associated with preservation of their renal function," Dr. Copland said at the meeting, which was sponsored by the University of British Columbia.

Renal function should be monitored closely after starting these agents. "We will accept a 25% loss of renal function up front," he noted, because this short-term trade-off is acceptable for the long-term gain in renal protection. But "if renal function continues to worsen, that's the one group of people in whom I would have to say I would abandon the therapy."

Development of hyperkalemia is not a reason to discontinue ACE inhibitors and ARBs. "I add on other therapies for their hyperkalemia," Dr. Copland said. Calcium resonium is typically preferred over sodium polystyrene, because the sodium in the latter will worsen heart failure.

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DR. COPLAND

In treating blood pressure, "our initial target would be 130/80 mm Hg, particularly for people who have protein in their urine," he said. If they still have proteinuria at that target, "we would just keep going as low as they tolerate."

Recent studies of epoetin alfa have found no cardiovascular benefit for patients with chronic kidney disease, and a trend toward an increased risk of death. "People do feel better, so they stay off of dialysis for longer. So from a cost point of view, which is not a clinical parameter, we use this therapy," Dr. Copland said.

"Sometimes treating the heart failure actually treats the kidney disease," he noted. For challenging patients who have both high cardiac output and volume overload, treatments include loop diuretics, nitrates, positive airway pressure, nesiritide, and possibly ultrafiltration, which may offer an alternative to diuresis.

Trials of ultrafiltration have had conflicting results, Dr. Copland said. In the largest one to date—the UNLOAD trial (Ultrafiltration vs. IV Diuretics for Patients Hospitalized for Acute Decompensated CHF)—patients given ultrafiltration had a greater weight loss than patients given diuretics, with a difference of 5 vs. 3 kg (J. Am. Coll. Cardiol. 2007;49:675-83). Subjective dyspnea scores did not differ. But at 90 days, patients given ultrafiltration were less likely to have been rehospitalized for heart failure (18% vs. 32%).

"The problem with all of these trials is that they excluded the sickest groups of people, so I think the jury is still a bit out," he said.

Dr. Copland said that he sits on the advisory board of Baxter Healthcare. ■