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ACE & ARB Don't Mix

It seemed like a good idea. ACE inhibitors (Altace®, Vasotec®, Monopril®, etc.) reduce the production of angiotensin. ARBs (Diovan®, Cozaar®, Avapro®, etc.) block it. That one-two punch should go a long way towards improving angiotensin related problems such as hypertension and renal impairment, right?

Alas, the combination seems to be causing problems rather than preventing them. While each of these drug classes reduces the amount of protein lost in the urine, together they worsen renal function. Serum creatinine may double and the need for dialysis increases.

This information came from the ONTARGET study, which was completed in 2008. The study attempted to show, among other things, that using an ACE inhibitor and an ARB together is beneficial. The *Canadian Hypertension Education Program* now advises doctors to stop prescribing these drugs together. The *Canadian Heart and Stroke Foundation* has alerted all patients using dual

therapy to see their physicians immediately. We are alerting all physicians with residents using these medications together of the dangers of this combination.

Glyburide Under Fire

Glyburide does a good job of lowering blood sugar in Type II diabetics. Unfortunately, it sometimes works too well and causes hypoglycemia.

Glyburide is eliminated by the kidneys, but renal function in diabetics is often poor. This can cause it to accumulate and hypoglycemia may result. To evaluate the kidney's filtering ability we use a measure called the glomerular filtration rate (GFR). High GFRs indicate healthy kidneys which can remove waste products and medications from the bloodstream quickly.

Glyburide is considered safe to use if the GFR is greater than 50 mL/min. GFR is calculated based on the age, weight, gender and serum creatinine level. An 85-year old female resident, weighing 62 Kg. and having a serum creatinine of 70 $\mu\text{mol/L}$ would have a GFR of 50 mL/min. Any female resident with similar values who is lighter, older or has a higher serum creatinine is at risk if they are using glyburide. Men have slightly higher GFRs; therefore their risk is modestly lower. Some labs report eGFR (estimated

GFR) which gives us a quick indication whether or not glyburide is appropriate.

Fortunately, there is an alternative to glyburide in these residents. Diamicon® (gliclazide) is metabolized by the liver and its metabolites are inactive. As a result, it is much safer to use in those with renal impairment. One 5 mg tablet of glyburide is roughly equivalent to Diamicon MR® 30 mg daily, or Diamicon® 40 mg twice daily. Your consultant pharmacist will be reviewing the renal function of all residents using glyburide. When indicated, Diamicon® will be recommended.

Cran Concern

There is a fair bit of evidence that cranberry juice and extracts reduce the incidence of UTIs in elderly women who experience frequent infections. It appears that a substance in cranberries prevents bacteria from adhering to the walls of the bladder.

This natural approach can reduce antibiotic use. There is a risk, however. A number of case reports show interactions between cranberry juice and warfarin. INR elevations and bleeding have occurred. Cranberry products should be avoided or their use minimized in those taking warfarin.

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