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Penicillin Allergy – Not Likely

Allergies to penicillin and related beta-lactam drugs (e.g. cephalosporins – Keflex®, Cefzil®, etc.) are commonly reported. These “allergies” can push prescribers to treat infections with less effective, more toxic or interacting antibiotics. Wouldn't it be nice if we could use penicillins or their cousins when they are the preferred agents? A study in *Clinical Infectious Disease* last June suggests we often can.

The study was based on data obtained from three Toronto hospitals. Patients with known anaphylactic and significant skin reactions to penicillin were excluded from the study. Others, with unclear penicillin allergy histories received a skin test called BLAST (beta-lactam allergy skin testing).

At Sunnybrook Hospital, 99% of those tested were deemed “not allergic”! Combined data from the three hospitals showed that 81% of these patients ultimately received a beta-lactam drug. Testing was done under controlled conditions by a trained team of specialists.

Unfortunately, this level of testing would be difficult in our facilities. In cases where a culture indicates a penicillin is the primary option and the allergy history is weak, we may want to consider using one of these drugs. Cephalosporins with no cross-reactivity with penicillins (Suprax®, Ceftin® and ceftriaxone) may also be good options, where their spectrum is appropriate.

Vitamin D for Diabetes

Is there anything that vitamin D can't do? It has known benefits in osteoporosis and falls prevention. There is some evidence that it offers protection against cancer and cognitive loss, as well as a role in treating pain and heart failure, etc.

In the disorders above, vitamin D deficiency is often associated with more severe symptoms. Diabetes is another disease with a suggested link to vitamin D levels. A prospective US study of 903 people in Southern California showed that low vitamin D levels increased probability of diabetes emerging later in life.

Subjects in the study were followed for more than twelve years. Vitamin D levels (measured by the metabolite 25-OH D3) in the normal range (>75 nmol/L) were only one-third as likely to develop type 2 diabetes. Those with high-

normal levels (>125 nmol/L) had just one-fifth the risk.

While this news seems to favour vitamin D supplementation, study subjects did not take extra D. They derived it naturally from the California sun. A recent five-year trial examining whether added vitamin D could prevent diabetes also failed to show benefit. Still, leaving D deficiency unchecked does not seem a viable option.

Digoxin Doomed?

Many trials have shown increased mortality when digoxin is given to patients with atrial fibrillation (AF). Those initiating the drug seem to be at greatest risk. Some physicians still believe digoxin has a place in AF treatment. They blame the negative outcomes on patient factors, suggesting digoxin is being used in the most advanced AF cases accompanied by CHF.

The latest blow comes from a review of the *Aristotle* trial, which evaluated apixaban (Eliquis®) vs. warfarin in the treatment of AF. New digoxin orders in the trial correlated with increased patient death. All-cause and cardiac mortality increased sharply with serum digoxin levels greater than 1.5 nmol/L. Residents taking digoxin for years may have survived its initiation, but serum levels should be checked regularly to mitigate risk.

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