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D is for Dementia

I've resisted the urge to write about vitamin D recently, but I guess the time has come to revisit it. Earlier this month, the results of a large prospective study made a splash on the newswires. The study, published in *Neurology*, showed a clear link between vitamin D deficiency and dementia.

The 1658 American participants came from a variety of ethnic backgrounds and averaged 74 years of age. They were categorized into three groups, based on serum 25-hydroxy-vitamin D₃ [25(OH)D] levels. Severe deficiency was defined as 25(OH)D < 25 nmol/L, deficient as 25 – 50 nmol/L and sufficient, > 50 nmol/L. In osteoporosis, levels below 75 nmol/L are considered deficient as they correlate with increased events (fractures). With dementia, the protective threshold seems to be lower, above the 50 nmol/L level.

Over the 5 ½ years data was gathered, 171 subjects developed dementia. Those in the severely deficient group

were 122% more likely than those in the sufficient group to advance to dementia. Those in the deficient group were 51% more likely to progress to dementia. While the study does not prove that vitamin D deficiency causes dementia, it certainly seems quite undesirable. Further studies are required to determine whether vitamin D supplementation can actually prevent dementia.

Probiotics for BP

Many health claims have been made in the name of probiotics. Most of them have not been substantiated. Evidence of reduction of diarrhea, especially when associated with antibiotic therapy, is fairly strong. UTI prevention also has good support. We may have yet another very good reason for increasing our probiotic intake – reducing blood pressure.

An article in *Hypertension* examines BP reductions seen in a number of trials involving probiotic supplements and foods. With daily doses between 1 billion and 1 trillion “colony forming units”, systolic BP was reduced by an average of 3.5 mm Hg. Eating foods with multiple organisms or for extended periods led to greater BP reductions. Perhaps our Norvasc® would be best administered with a dollop of yogurt or a swirl of goat cheese.

Atenolol in the Elderly

Beta blockers are used for multiple cardiovascular ailments, including CHF, atrial fibrillation, coronary artery disease and hypertension, and for protection in the post MI period.

Monocor® (bisoprolol), has been the most prominent β-blocker recently, as it shows a strong mortality benefit in CHF. Bisoprolol's gains have come largely at the expense of an older β-blocker, atenolol (Tenormin®).

A recent retrospective analysis shows that it may not be time to close the door on atenolol just yet. The analysis, in *Am J Kidney Disease*, compared over 150,000 Ontario patients, half of whom were treated with metoprolol and half with atenolol. Many patients had poor kidney function. Since atenolol is eliminated by the kidneys (unlike metoprolol, which is metabolized by the liver), it was expected that atenolol would accumulate in many patients, resulting in more adverse outcomes.

In fact, there were more deaths in the first 90 days within the metoprolol group, especially among those with the poorest renal function. Hospitalization due to MI was 16% lower with atenolol and 65% lower due to tachycardia. Further study may be required, but it looks like atenolol has earned the right to stick around for a bit longer.