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Ouch, That Hurts!

What would happen if we took a poll of our diabetic residents and asked this question... Would you like to have your blood glucose checked more often, less often or just the way it is being done now? Of course, only those obsessed with their numbers or wanting unnecessarily tight control would vote against a reduction.

Blood glucose testing is uncomfortable (even with today's ultra-thin lancets), inconvenient, and damaging to the fingers. It is also very costly in terms of nursing time and supplies. Earlier this month, a group of LTC physicians gathered in Hamilton to discuss blood glucose testing. The purpose of the meeting was to promote a more responsible way of testing blood glucose. Some pharmacists from a few key LTC pharmacies were also invited for their input and to spread the gospel.

All recent evidence points towards less aggressive treatment of diabetes in the elderly. Multiple studies (*Accord, Advance and VADT*)

show no mortality benefit with an A₁C target of 7, and increased hip fractures with A₁Cs under 8. The *Canadian Diabetes Guideline, 2013*, set an A₁C target of $\leq 8.5\%$ to increase quality of life and minimize hypoglycemia risk in the frail elderly.

As a consultant pharmacist, few things are more troubling than reviewing a resident with perfect blood sugars who is enduring QID CBG checks. Recommendations from the LTC group for stable residents include: no CBG monitoring for residents on metformin, BID once weekly monitoring for those on other oral hypoglycemic and BID, twice weekly monitoring for those using insulin alone.

These recommendations all make sense. Metformin does not cause hypoglycemia, so quarterly A₁C checks are all we need. Less testing with insulin is also wise, especially if dosing is relaxed to aim for the 8.5% target. New residents and those who are not stable need more frequent testing. Staff must also be aware of signs of low blood sugar, so they can respond if necessary. Let's aim to test responsibly, save time, and improve our residents' quality of life.

Antidepressants and Na

The elderly are more susceptible to drug related adverse effects than younger

patients. One such adverse effect is hyponatremia (low sodium) related to the use of antidepressants. These drugs exert this effect by increasing production of antidiuretic hormone. This causes the kidneys to retain fluid, diluting sodium in the bloodstream. This in turn can cause a myriad of problems, including nausea, headache, lethargy, confusion, etc. which can advance to seizures, coma, respiratory arrest and death.

The prevalence of this problem has been difficult to determine, but some estimates have it as high as 32%. Hyponatremia may develop within the first two weeks of antidepressant treatment or may take months to emerge. SSRIs (e.g. Celexa®, Zoloft®, Paxil®, etc.) and SNRIs (Effexor® and Cymbalta®) are the worst offenders. Wellbutrin® (bupropion) is the least likely to affect sodium levels.

Frail elderly and those with low or low-normal serum Na levels (≤ 138 mEq/L) are most susceptible to this problem. Restricting fluid intake to less than 800 ml per day and stopping the causative drug should return Na levels to normal within two weeks, as long as the problem is recognized in time. If antidepressant therapy is to be reinstated, bupropion or possibly mirtazapine should be selected.

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