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Ozempic®

There's another new option in diabetes care. Ozempic® is the first GLP-1 agonist approved for ODB coverage in Ontario. GLP-1 medications are injectable meds (usually) that stimulate insulin release and reduce glucagon (a hormone which increases glucose levels) from the pancreas.

Ozempic® is injected s.c. once weekly, so it is very convenient. It can be used to supplement oral therapy or to delay or eliminate the need for insulin. Alternatively, it can be added to basal insulin (e.g. Lantus®, Tresiba®), to reduce dosage or delay the initiation of rapid insulin. Ozempic® effectively reduces A_1C and weight, so residents with high BMI are the primary target group. Impaired renal or hepatic function do not preclude its use.

There are some precautions to be aware of with Ozempic®. It is contraindicated in the presence of thyroid tumors and not recommended in people with pancreatitis. There have been a limited number of reports of diabetic retinopathy and acute kidney injury. The main side effects are nausea, vomiting and diarrhea. For that reason, Ozempic® is initiated at a subtherapeutic dose of 0.25mg weekly for the first four weeks. The dose is increased to 0.5mg weekly, then 1mg weekly, if necessary. It is not to be used with Trajenta®, Januvia® or Onglyza®, which are related oral agents. At over $200/pen, cost is also an issue.

HS BP Meds Impress

Several years ago, studies showing better outcomes when BP meds were taken at night vs. in the AM began to appear. The MAPEC trial in 2010 showed a 67% reduction in major CV adverse effects and death when at least one BP lowering drug was given at bedtime. The primary anti-hypertensives in this study were ACEIs (e.g. perindopril, ramipril) and ARBs (valsartan, candesartan, etc.). Renal function improved throughout the study (less albumin loss), and nocturnal BPs were lower (BP dipping), mimicking a healthy physiological pattern.

The Hygia Chronotherapy Trial was published in the *European Heart Journal* recently. It assessed almost 20,000 patients to see if the same benefits shown earlier would be retained with a wide range of BP lowering drugs. Patients were randomized into two groups that were similar in terms of medical history, and renal and cardiac function. One group took all their BP meds in the morning and the other took all their BP meds at bedtime. The medications included ACE inhibitors, ARBs, calcium channel blockers (primarily amlodipine), beta-blockers and diuretics (it was surprising to see these given at bedtime).

Bedtime dosing was vastly superior to AM administration. CV death was reduced by 56% (hazard ratio – HR 0.44). HRs for heart failure (0.58), stroke (0.51), MI (0.66) and angina (0.65) were some of the adverse outcomes showing significant improvement. Older patients (>60 years) did better than younger ones, and doses of BP meds were lower in the bedtime group at the end of the 6.3-year study. Kidney function was similar in each group when the study started, but improved significantly in the bedtime group (decreased serum creatinine and urinary albumin loss).

Nightime BPs were lower in the bedtime group, as determined by ambulatory BP monitoring. Nocturnal hypotension was reported in 0.3% of participants, the only notable adverse events seen in the bedtime group. Although bedtime administration of BP meds would be logistically difficult for some residents, it is an option that should be strongly considered, where practical.

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