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The Medical Bulletin

Obesity

SEMAGLUTIDE QUIZ –MEDSCAPE.COM

Mary L. Windle, PharmD January 20, 2022 Called a "game changer" weight loss drug by some experts, semaglutide is the first such medication approved by the US Food and Drug Administration since 2014. Semaglutide is indicated for use in adults with obesity or overweight and at least one weight-related condition (such as type 2 diabetes, high blood pressure, or high cholesterol). The drug should be used in tandem with increased physical activity and a reduced-calorie diet. Given semaglutide's potential to help reduce serious weight-related conditions, knowledge regarding related clinical issues is essential.

A recent systematic literature review summarized the latest evidence on weight-lowering drugs. Researchers examined data from 143 clinical trials, with a total of 49,801 participants, that assessed the proportion of patients who achieved at least a 5% weight reduction on different medications compared with lifestyle interventions. Semaglutide, a glucagon-like peptide 1 (GLP-1) receptor agonist, had larger benefits than other drugs with a similar risk for adverse events for both likelihood of weight loss of 5% or more (odds ratio, 9.82; 95% CI, 7.09-13.61) and percentage body weight change (mean difference, 11.41; 95% CI, 12.54 to -10.27). Phentermine-topiramate was found to be potentially the most effective drug for weight loss of all the available medications for treatment of overweight and obesity, followed by GLP-1 receptor agonists, including semaglutide. However, odds of discontinuation due to adverse events were greater for both liraglutide and phentermine-topiramate than semaglutide; that factor itself was found to produce the largest likelihood of a weight reduction of 5% or more relative to lifestyle interventions among three GLP-1 receptor agonists (semaglutide, liraglutide, and exenatide). Semaglutide also delivered better results than lifestyle interventions, phentermine-topiramate, and other medications for participants who were significantly more likely to experience at least a 10% weight loss. Mean weight change from baseline was greatest with semaglutide.

In rodents, semaglutide causes dose-dependent and treatment-duration–dependent thyroid C-cell tumors at clinically relevant exposures; it is unknown whether it causes these tumors, including medullary thyroid carcinoma (MTC), in humans because the human relevance of semaglutide-induced rodent thyroid C-cell tumors has not been determined. However, semaglutide is contraindicated in patients with a personal or family history of MTC or in patients with multiple endocrine neoplasia syndrome type 2. Advise patients of the potential risk for MTC with semaglutide and the possible symptoms of thyroid tumors (eg, a mass in the neck, dysphagia, dyspnea, persistent hoarseness). Hypertension, along with dyslipidemia and T2D, is one of the weight-related comorbid conditions in overweight adults that indicates that use of semaglutide might be appropriate. Semaglutide, is indicated as an adjunct to a reduced calorie diet and increased physical activity for chronic weight management in adults with an

initial body mass index of 30 or greater (obesity) or 27 or greater (overweight) in the presence of at least 1 weight-related comorbid condition. 1/22/22, 10:08 AM Semaglutide is not contraindicated for patients with hypothyroidism. However, because semaglutide causes a delay of gastric emptying, it may affect the oral absorption of thyroid medications. Although heartburn has been reported as an adverse effect of semaglutide, it is not contraindicated in patients with gastroesophageal reflux disease.

Semaglutide, specifically the brand Ozempic, is indicated as an adjunct to diet and exercise to improve glycemic control in adults with T2D. It is also indicated to reduce risk for major adverse cardiovascular events (eg, cardiovascular death, nonfatal myocardial infarction, nonfatal stroke) in adults with T2D and established cardiovascular disease. Some patients may prefer oral administration (Rybelsus) over the subcutaneous form, and neither is recommended above the other.

In clinical trials, cholelithiasis was reported by 1.6% of those taking semaglutide and 0.7% of those taking placebo. In terms of cholecystitis, the rates were 0.6% with the higher dose of semaglutide vs 0.2% with placebo. Impotence, mucositis, and hyperhidrosis have not been cited as significant concerns associated with semaglutide use.

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