What Is the Main Risk of Using Ozempic during Preoperative Care in Plastic Surgery?

Qual é o principal risco do uso do Ozempic no pré-operatório de cirurgia plástica?

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Dear Editor,

Ozempic (Novo Nordisk A/S, Bagsværd, Denmark) is the commercial name of semaglutide, a drug approved by the United States Food Drug Administration (FDA) in 2017 for the control of blood glucose levels in type-2 diabetes and to reduce the risk of cardiovascular complications. This medication is injected subcutaneously once a week. More recently, the same manufacturer launched semaglutide for oral use, once a day, on an empty stomach (Rybelsus). Therefore, the demand for semaglutide use tends to remain high worldwide. It has been estimated that nearly 5 million prescriptions for semaglutide were written in 2020 in the United States.[1]

Ozempic is a glucagon-like peptide 1 (GLP-1) agonist whose actions include increasing glucose-dependent insulin secretion, reducing glucagon secretion, delaying gastric emptying, and increasing satiety. These agonists play a significant role in reducing postprandial blood sugar levels. Postprandial hyperglycemia is an independent risk factor for macrovascular disease, and its control is essential to reduce cardiovascular mortality in diabetic patients.

However, the worldwide increased demand for this medication is precisely due to its off-label effect of reducing body weight. It is used even for relatively rapid preoperative preparation for plastic surgery procedures. Thus, plastic surgeons end up receiving several patients using GLP-1 agonists.

It is worth noting that this medication may have some adverse effects that may interfere with the intraoperative and postoperative period of patients undergoing plastic surgery procedures, including nausea, vomiting, diarrhea, hypoglycemia, and acute pancreatitis.

Nevertheless, the most concerning aspect, especially for anesthesiologists and surgeons, is the gastric emptying delay resulting from this medication. This phenomenon creates a risk of pulmonary aspiration of residual contents regurgitated from the stomach during sedation or general anesthesia procedures. The relatively short-term use of Ozempic, as is being performed by patients undergoing plastic surgery, has a higher effect on reducing gastric emptying, resulting in greater control of postprandial blood sugar levels and satiety, for there is no desensitization to GLP-1 receptors.

Due to this risk, in June 2023, the American Society of Anesthesiologists published a recommendation to discontinue GLP-1 agonists one week before surgical procedures, regardless of whether Ozempic was used for weight loss or diabetes. Now, if the patient presents gastrointestinal symptoms, such as nausea, vomiting, or abdominal pain, the recommendation is to suspend the elective procedure.[2] Some authors[3] recommend discontinuing Ozempic use 3 weeks before surgery. Moreover, the effects of GLP-1

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agonists on delayed gastric emptying decrease with prolonged medication use.[3] However, the patient may be using the medication intermittently, which increases the risk of delayed gastric emptying.

The Canadian Society of Anesthesiologists recommends a 3-week suspension due to reports[4] of patients using Ozempic who regurgitated large volumes of gastric contents despite adequate fasting before general anesthesia for elective breast surgery. In addition, gastroenterologists have reported a 10-fold increase in the prevalence of residual gastric contents in patients using GLP-1 receptor agonists (5.4%) compared with controls (0.8%) during upper gastrointestinal endoscopy.[5]

If GLP-1 agonist termination for 3 weeks is not feasible, the Canadian Society of Anesthesiologists recommends a rapid-sequence induction of general anesthesia (as if the patient had a full stomach). However, the aforementioned recommendations cannot be adopted as guidelines because studies with strong scientific evidence to support such recommendations are still lacking.

Conflict of Interests
The authors have no conflict of interests to declare.

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