Anesthesiologist provides guidance for perioperative care of patients on GLP-1RA therapy

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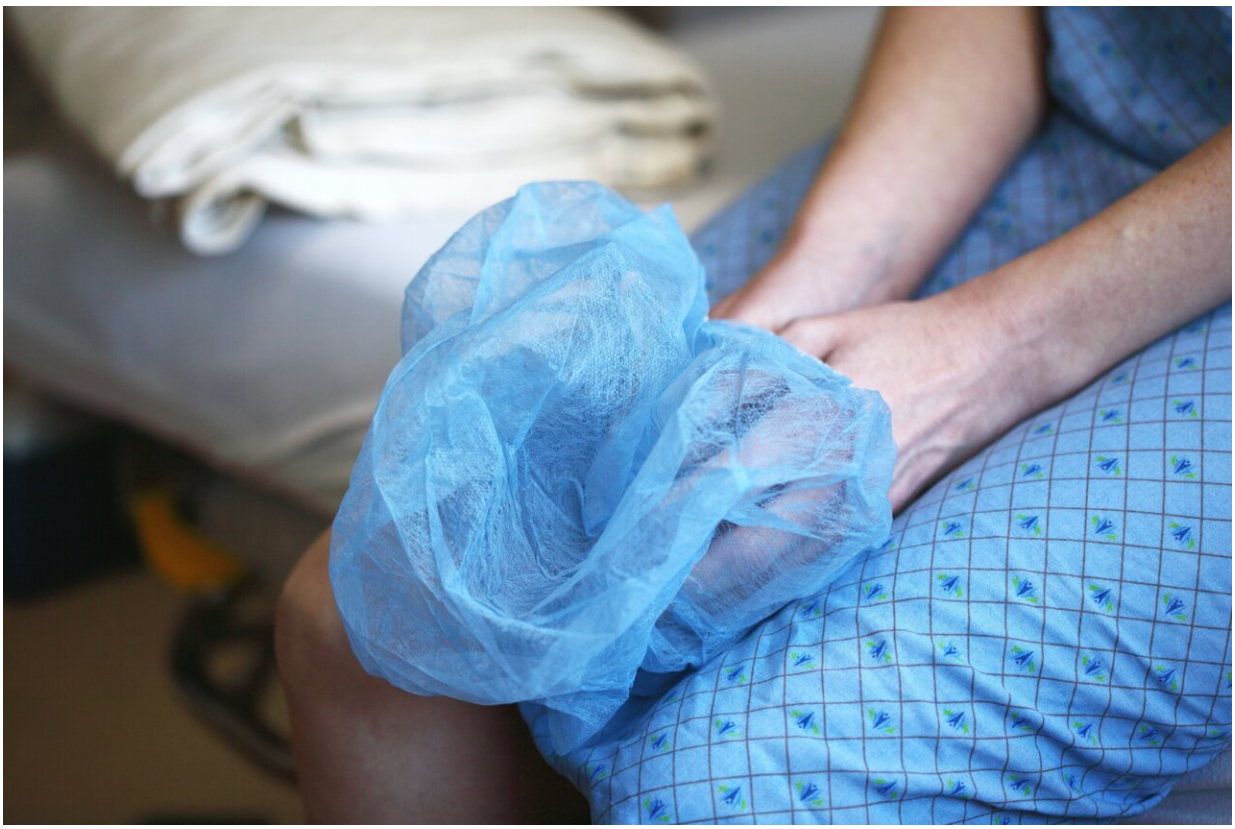

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Glucagon-like peptide 1 receptor agonists (GLP-1RAs) are successful in treating type 2 diabetes mellitus and obesity. However, their use can

increase the risk of regurgitation and pulmonary aspiration of gastric contents during sedation or general anesthesia.

In the January 2024 issue of *Anesthesia & Analgesia*, Girish P. Joshi, MBBS, MD, FFARCSI, professor of anesthesiology and pain management at the University of Texas Southwestern Medical Center in Dallas, shares clinical pearls for anesthesiologists providing perioperative care to patients using these drugs.

GLP-1RAs have been shown to delay gastric emptying, which Dr. Joshi confirms in an updated literature review. This effect can be exacerbated by the gastroparesis associated with advanced diabetes. Moreover, in September the U.S. Food and Drug Administration updated the warning label for semaglutide to include ileus as a possible side effect.

Delayed gastric emptying and ileus can increase the residual gastric volume (RGV) even if preoperative fasting recommendations are followed, Dr. Joshi warns. Several case reports have been published concerning regurgitation and aspiration under anesthesia in patients using a GLP-1RA.

Pre-procedure withholding of GLP-1RAs

Dr. Joshi was the lead author of consensus-based guidelines from the American Society of Anesthesiologists (ASA) on preoperative management of adults and children using a GLP-1RA. These guidelines recommend that patients hold their daily dose of GLP-1RA on the day of the procedure or their weekly dose seven days before the procedure, whether they are taking a GLP-1RA for diabetes or weight loss.

"Of note, if GLP-1RAs prescribed for diabetes mellitus are held for longer than the dosing schedule, consider consulting an endocrinologist for bridging the antidiabetic therapy," Dr. Joshi says. He adds that

caution is particularly advisable during the initial 12 to 20 weeks of GLP-1RA therapy, which appears to be a critical interval for delayed gastric emptying.

"The concern about pulmonary aspiration has led to the notion that the longer the fast the safer it is for the patient," Dr. Joshi says. However, "intake of clear liquids may paradoxically reduce RGV. Furthermore, even if regurgitation and aspiration of clear fluid occurs, it is unlikely to result in significant morbidity." To date there is no evidence about the optimal fasting duration for patients on GLP-1RAs, Dr. Joshi says, and his group's new guidelines suggest following the standard ASA fasting guidelines.

Day-of-procedure management for patients on a GLP-1RA

Dr. Joshi provides specific recommendations about patient management on the day of a procedure:

- If the GLP-1RA was not held as advised and/or if the patient has significant GI symptoms, consider evaluating RGV using point-of-care gastric ultrasound. If the stomach is empty, proceed as usual. If the stomach is full or gastric ultrasound is inconclusive or impossible, delay the procedure or treat the patient as "full stomach" and manage accordingly.
- Have a low threshold for considering rapid sequence induction to secure the airway.
- Regurgitation and aspiration can occur after tracheal extubation, so the general anesthetic technique should allow for rapid recovery of baseline mental status. Awake extubation is standard care.

Dr. Joshi reminds readers, "Shared decision-making principles dictate that the potential risks and benefits of each option should be openly and transparently discussed with the patient and the proceduralist/surgeon."

More information: Girish P. Joshi, Anesthetic Considerations in Adult Patients on Glucagon-Like Peptide-1 Receptor Agonists: Gastrointestinal Focus, *Anesthesia & Analgesia* (2023). DOI: 10.1213/ANE.0000000000006810

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