American Society of Anesthesiologists®

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American Society of Anesthesiologists Consensus-Based Guidance on Preoperative Management of Patients on Glucagon-Like Peptide-1 (GLP-1) Receptor Agonists

Glucagon-like peptide-1 (GLP-1) receptor agonists are approved by the Food and Drug Administration for treatment of type 2 diabetes mellitus and cardiovascular risk reduction in this cohort. In addition, GLP-1 receptor agonists are also used for weight loss.

The GLP-1 agonists are associated with adverse gastrointestinal effects such as nausea, vomiting and delayed gastric emptying. Based on recent anecdotal reports, there are concerns that delayed gastric emptying from GLP-1 agonists can increase the risk of regurgitation and pulmonary aspiration of gastric contents during general anesthesia and deep sedation. The presence of adverse gastrointestinal symptoms (nausea, vomiting, dyspepsia, abdominal distension) in patients taking GLP-1 agonists are predictive of increased residual gastric contents. The effects on gastric emptying are reported to be reduced with long-term use.

The use of GLP-1 agonists in pediatrics has primarily been reported for the management of type 2 diabetes mellitus and obesity. The published literature on GLP-1 agonists in pediatrics is predominantly from pediatric patients 10-18 years old; concerns are like those reported in adults.

The American Society of Anesthesiologists (ASA) Task Force on Preoperative Fasting reviewed the available literature on GLP-1 agonists and associated gastrointestinal adverse effects, including the consequences of delayed gastric emptying. The evidence to provide guidance for preoperative management of these drugs to prevent regurgitation and pulmonary aspiration of gastric contents is sparse limited only to several case reports. Nevertheless, given the concerns of GLP-1 agonists- induced delayed gastric emptying and associated high risk of regurgitation and aspiration of gastric contents, the task force suggests the following for elective procedures. For patients requiring urgent or emergent procedures, proceed and treat the patient as ‘full stomach’ and manage accordingly.

For patients scheduled for elective procedures consider the following:

DAY(S) PRIOR TO THE PROCEDURE:

- For patients on daily dosing consider holding GLP-1 agonists on the day of the procedure/surgery. For patients on weekly dosing consider holding GLP-1 agonists a week prior to the procedure/surgery

- This suggestion is irrespective of the indication (type 2 diabetes mellitus or weight loss), dose, or the type of procedure/surgery

- If GLP-1 agonists prescribed for diabetes management are held for longer than the dosing schedule, consider consulting an endocrinologist for bridging the antidiabetic therapy to avoid hyperglycemia

DAY OF THE PROCEDURE:

- If gastrointestinal (GI) symptoms such as severe nausea/vomiting/retching, abdominal bloating, or abdominal pain are present, consider delaying elective procedure, and discuss the concerns of potential risk of regurgitation and pulmonary aspiration of gastric contents with the proceduralist/surgeon and the patient

- If the patient has no GI symptoms, and the GLP-1 agonists have been held as advised, proceed as usual

- If the patient has no GI symptoms, but the GLP-1 agonists were not held as advised, proceed with 'full stomach' precautions, or consider evaluating gastric volume by ultrasound, if possible and if proficient with the technique. If the stomach is empty, proceed as usual. If the stomach is full or if gastric ultrasound inconclusive or not possible, consider delaying the procedure or treat the patient as 'full stomach' and manage accordingly. Discuss the concerns of potential risk of regurgitation and pulmonary aspiration of gastric contents with the proceduralist/surgeon and the patient

- There is no evidence to suggest the optimal duration of fasting for patients on GLP-1 agonists. Therefore, until we have adequate evidence, we suggest following the current ASA fasting guidelines

Common *GLP-1 Agonists*

GLP1 Agonists	Clinical Dosing	Pharmacokinetics		Special Considerations
		HALF-LIFE	ELIMINATION	
Exanetide (Byetta®, Bydureon®)	SQ, twice daily (IR), weekly (ER),uptitrated	3 hours	Renal	Associated with immune-mediated thrombocytopenia
Lixisenatide (Adlyxin®)	SQ, daily, uptitrated	3 hours	Renal	No longer available in United States
Semaglutide (Wegovy®, Ozempic®, Rybelsus®)	SQ, weekly, uptitrated Oral, daily, uptitrated	7 days	Renal	Approved (SQ formulation only) for weight loss
Liraglutide (Saxenda®, Victoza®)	SQ, daily, uptitrated	12.5 hours	Renal	Approved for weight loss
Dulaglutide (Trulicity®)	SQ, weekly	4.5 days	Renal	
GLP1/GIP Agonist				
Tirzepatide (Mounjaro®)	SQ, weekly	5 days	Renal	Approved for weight loss

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SQ: subcutaneous