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OPTIMIZING SEMAGLUTIDE SUSPENSION TIMING PRE-SURGERY: PRELIMINARY RESULTS OF A SYSTEMATIC REVIEW AND META-ANALYSIS

Pedro Lucas Carneiro Ferreira (PROBIC-FAPERGS), Luciano da Silva Selistre (Orientador(a))

This systematic review examines the perioperative management of patients with type 2 diabetes, obesity, or overweight undergoing surgery and treated with semaglutide, a GLP-1 receptor agonist. While semaglutide supports glycemic control and weight loss, its perioperative effects—such as increased residual gastric content, bronchial aspiration, and airway management complications—remain unclear. These patients already present elevated perioperative risk due to delayed gastric emptying and airway challenges, potentially increasing morbidity and recovery time. This study follows PRISMA guidelines and the Cochrane Handbook. The protocol was registered with PROSPERO (CRD42024609601). A systematic search (inception–Nov 2024) was conducted in Scopus, Web of Science, Embase, PubMed, LILACS, Cochrane Library, and Opengray.eu. Inclusion: adults (?18 years) receiving preoperative semaglutide; RCTs and observational studies reporting outcomes such as gastric content, bronchial aspiration, airway complications, drug withdrawal period, and overall perioperative complications. Exclusion: significant comorbidities, contraindications to semaglutide, other GLP-1 drugs, case reports, non-English studies without translation, and incomplete data. Two researchers (VRB, PLCF) independently extracted data; discrepancies were resolved by a third (CSB). Meta-analysis was performed using RStudio (v2024.12. 1-563). Of 14,280 records, 11,878 remained after removing duplicates. After screening, 11,812 were excluded. Fifty-five full texts were assessed, and 11 cohort studies (one prospective) were included (n = 60,978; semaglutide users = 11,675). Semaglutide was primarily used for weight loss (n = 1,263) and diabetes (n = 371). Mean age: 56.78 (semaglutide) vs. 55.9 (control); females: 46.1% vs. 40%. Most patients were ASA I–II. Mean semaglutide use: 149 days. Drug interruption: <21 days for most. Semaglutide was associated with higher residual gastric content (OR = 1.33; 95% CI: 1.17–1.50), more digestive symptoms (OR = 5.62; 95% CI: 3.58–8.83), and increased procedure discontinuation (OR = 2. 45; 95% CI: 1.84–3.27). Pulmonary aspiration risk was not significant (OR = 0.66; 95% CI: 0.41–1.09). Semaglutide impacts gastric content post-discontinuation but does not significantly increase aspiration risk. The timing of its suspension before surgery remains uncertain. Anesthetic strategies for full stomach conditions—like rapid sequence induction or awake intubation—should be considered. Further analysis, including methodological quality and sensitivity assessment, is needed for definitive guidance.

Palavras-chave: Semaglutide suspension, Bronchial aspiration, Residual gastric content

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