

Perioperative Management of Patients With Diabetes Mellitus



Diabetes mellitus (DM) is a chronic disease that is becoming increasingly common in the general population. An estimated 537 million people worldwide have DM. Its prevalence is expected to increase to 700 million by 2045. Approximately 1 in 11 adults in Europe have DM, roughly 61 million individuals.

Patients with diabetes account for 15% of all surgical procedures, which burdens healthcare systems significantly as these patients are typically more complex clinically. Managing patients with diabetes during the perioperative period is a challenge that is often overlooked, even though it is a critical time for this already high-risk patient population. Unpredictable fasting times before surgery, potentially risky administration of intravenous medications like insulin, and the stress response of surgery can lead to unfavourable postoperative outcomes. In addition to the human toll, there are economic consequences, such as longer hospital stays.

Several guidelines are available for the perioperative management of patients with diabetes. However, discrepancies between these guidelines exist, mainly because of a lack of evidence in the perioperative management of patients with diabetes and the use of outdated guidelines.

This review provides a summary of current data on how the perioperative management of these patients can impact clinical outcomes. It also highlights the need for future research to prioritise this important and often neglected clinical cohort.

The NHS National Diabetes Inpatient Audit (NaDIA) Harms 2020 reported 4605 serious events among patients with DM. The most common events were hypoglycaemia, in-hospital diabetic ketoacidosis (DKA), foot ulcer and hyperosmolar hyperglycaemic state (HHS). The NaDIA recommends participating in the Getting It Right First Time (GIRFT) programme to optimise the surgical pathway and to ensure proper identification and referral of patients with DM to avoid DKA and HHS.

One of the challenges in future research on perioperative management of diabetes is the lack of consistency in defining diabetes itself, which makes it difficult to identify trends, associations, and outcomes. Additionally, many available recommendations and guidelines are based on consensus and expert opinions rather than Level I or II clinical evidence. Furthermore, the medications available for patients with diabetes are constantly evolving, which creates a lack of clinical data on optimising the perioperative course of diabetic patients, particularly with the introduction of GLP-1 agonists, DPP-4 inhibitors, and SGLT-2 antagonists.

Large observational studies and clinical trials are necessary to determine the best perioperative management strategies for patients with diabetes undergoing surgery, focusing on early and intermediate postoperative outcomes.

Source: [British Journal of Anaesthesia](#)

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