

KETONE MONITORING OF PATIENTS ON SGLT2 INHIBITORS POST EMERGENCY SURGERIES

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Background

Sodium-glucose cotransporter-2 (SGLT2) inhibitors are a class of oral hypoglycaemics. Current perioperative guidelines recommend withholding these medicines for 3 days before surgeries and procedures, in order to prevent the development of euglycaemic diabetic ketoacidosis (EDKA) in the perioperative period¹. There are however very few guidelines on postoperative monitoring to detect EDKA, if SGLT2 inhibitors are unable to be withheld before procedures, for example in emergency presentations.

Aim

To retrospectively review the frequency of post-operative ketone and blood glucose level (BGL) monitoring in patients who were prescribed an SGLT2 inhibitor and received emergency surgery within a 12-month period (01/04/2021 – 30/04/2022).

Method

Patients prescribed an SGLT2 inhibitor who were admitted to the general surgery or orthopaedic wards for an unplanned procedure were identified and their medical records obtained. The patients' insulin and BGL charts were reviewed to identify if their ketones and BGLs had been checked postoperatively, and of these patients, how many had an elevated ketone reading.

Results

Patient group

- Total of 30 patients were identified, however only 20 patients were reviewed due to time limitations

Ketone monitoring

- 9 out of the 20 patients (45%) had NO ketone monitoring performed within 24 hours of their procedure
- Of the 11 patients who received ketone monitoring postoperatively, 6 patients (55%) returned a positive ketone reading (>0.6mmol/L)

Blood glucose monitoring

- 75% of the patients received blood glucose monitoring within 24 hours of their procedure

Conclusion

A gap in postoperative monitoring has been identified, with 45% of patients not receiving ketone monitoring which is necessary for the early detection of euglycaemic ketoacidosis. Pharmacists play a key role in identifying these patients early, either when completing a medication history in the emergency department or when reviewing the patient day one postoperatively on the ward. Pharmacists can also provide education and help raise awareness among surgical nurses of the required monitoring.