Perioperative management of diabetic patients – A survey of junior doctors current practice

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Introduction

10-15% of surgical patients are diabetic and, as such, it is common to observe higher complication rates, mortality and longer hospital stay(1). The management of blood sugars in the preoperative period is fundamental in ensuring a safe surgical journey for these patients. Moreover, deranged bloods sugars are associated with post-operative infections and intraoperative adverse events. In many hospitals, the management of these patients preoperatively is dependent on junior doctors. However, research has shown that there is variability in the compliance to the latest guidelines which can lead to sub-optimal management (2).

Objectives

The aim of this survey was to determine the level of familiarity of junior doctors at Queens Hospital, Burton, UK on the latest national guidelines in the management of diabetic patients preoperatively(3).

Method

We employed a 10-part survey to explore junior doctors' current practice and knowledge base on perioperative glycaemic control.

Results

34 foundation year doctors took part in this study Fig 1. Of these, 20% had training in preoperative blood sugar management in the previous year; 41% could identify 6-10 mmol/l to be the correct ideal blood glucose range and 88% could identify 49-69mmol/mol to be ideal range for perioperative Hba1C (Fig 2 and 3 respectively); 21% of respondents knew how to adjust a patient's current antidiabetic medication regime preoperatively with much confusion around when to stop metformin; 74% of participants recognised that a variable rate intravenous insulin infusion should be started if a patient is due to miss more than two consecutive meals; 88% understood the impact of diabetes on the order of the theatre list, acknowledging that diabetic patients should be prioritised when possible (Fig 4) and 58% knew to check blood sugar levels hourly while the patient is fasted. Fig 5 shows the proportion of FY1's who answered correctly compared to FY2 trainees.

Conclusion

It is essential that diabetic patients are adequately optimised for surgery to avoid pre, intra and postoperative complications, each of which can have lasting and deleterious effects for patients and the health service. However, our junior doctors appear inadequately trained in this discipline and are not aware of the latest guidelines.

Recommendations

This survey has highlighted that there is a need to introduce preoperative blood sugar management into the junior doctors' induction curriculum with the help of a starters handbook and provide them with more support when managing these patients.

FIGURE 1; PARTICIPANTS

FIGURE 2: WHAT IS THE IDEAL PERIOPERATIVE GLUCOSE RANGE FOR DIABETIC PATIENTS? (MMOL/L)

FIGURE 3: GOOD DIABETIC CONTROL IS INDICATED BY A HBA1C LEVEL OF? (MMOL/MOL)

FIGURE 4: WITH REGARDS TO THE ORDER OF THE OPERATIVE LIST, DIABETIC PATIENTS SHOULD BE?

FIGURE 5: CHART COMPARING FY1 AND FY2 CORRECT RESPONSES (%)

References:

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3. Dhatariya K, et al; NHS Diabetes Guideline for the perioperative management of the adult patient with diabetes. Diabet. Med. London: Blackwell Publishing Ltd;2012.420-33