Reply to Forum comments:

Dear Prof. Wolfsdorf,

Thank you for reading our chapter carefully and providing your valuable input, your comments, were very much appreciated. We have considered them and replied in kind as follows. The chapter has been amended as indicated where appropriate.

Comments

Dear authors, I have several comments and suggestions for your consideration.

P.3 Increasing use of glucose monitoring - amended

P.4 ... scheduled as the first case of the day on the surgical list - amended

... insulin regimen - amended

P.8 Type 2 diabetes “Patients undergoing a major surgical procedure expected to last at least 2 hours should be monitored and started on an IV insulin infusion”. Provide more specific instructions about what should be monitored and how frequently.

Thank you, we have now matched similar wording

- Patients undergoing a major surgical procedure expected to last at least 2 hours should be monitored with hourly glucose tests and adjustment of dextrose infusion or insulin accordingly to maintain blood glucose in the range 5 – 10 mmol/l (90 – 180 mg/dl) [E].

P. 9 insertion of grommets - done

P.10 “… all surgery or investigations under anesthesia that are more than minor …” Require BG monitoring before, hourly during, and after the procedure to detect hypo- and hyperglycemia” – thank you, we have adopted the wording

P.12 “… despite use of a tight blood glucose control protocol” - amended

Use of “diabetic” is not recommended; diabetic is repeatedly used throughout the manuscript. At least in the USA where I live and work, there is an ongoing campaign to raise awareness that people with diabetes do not want to be referred to as diabetics. “… poorly controlled individuals with diabetes” - thank you for this hint, it has been amended throughout the document, in similar fashion to your suggestion.
“Since the adult literature shows that outcomes are affected by the state of patients with diabetes before undergoing surgery, these studies allow us to make the following recommendations: ...” - amended

There are currently sufficient data (plural) ... - amended

P.13 In the discussion about pediatric reports in the critical care setting, the authors should be explicit that these studies were performed in children who did not have diabetes. - clarified

P.15 does “electrical equipment” refer to electrocautery? – yes, changed

P.17 “Must be admitted to hospital if receiving general anesthesia” Does this recommendation refer to BEFORE the procedure? In the US, many patients with well controlled diabetes who are scheduled for major procedures arrive in the pre-operative suite early in the AM on the day of the procedure. Health insurance does not pay for admission on the day before surgery in such cases. If the patient has other reasons to be hospital or diabetes is not well controlled, then admission before surgery would be approved.- The intent of the comment is that they are admitted prior to surgery, not admitted the day before. Thank you, to clarify, we have added this statement as you suggest above.

Make a recommendation about how frequently BG should be measured intra-operatively - done

Why reduce long-acting basal insulin by 50% or basal infusion rate by 20% if the dose has been properly calibrated? - This has been a point of much debate of the writing group, so we have kept the comment that some institutions reduce... The experience of these institutions is that in hospital setting patients tend to need lower insulin dose compared to the home setting. Therefore in settings with hospital admission over night before surgery a reduction of basal insulin does seem useful.

- If on CSII, most continue normal insulin basal rates, (some reduce basal at 0300 by 20% if there is concern over hypoglycemia).

In the ideal world with the ideal patient then basal rates we agree should be not needing to be changed. That is why we added the comment that some institutions... Consensus includes compromise; the lead statement is to continue basal rates as per normal. Basal insulin is not as predictable as the companies suggest and the consensus was cautious reduction was better than unexpected hypoglycemia.

P.19 Why 80% of the usual correction factor if BG >250 mg/dL? - changed

Indicate a target BG to calculate the correction dose. – we have added the following: Aim for blood glucose in the range 5 – 10 mmol/l (90 – 180 mg/dl) during all surgical procedures in children.

At my institution, we use 150 mg/dL as the correction target in the setting of surgery and anesthesia. Thank you, for consistency we have elected to keep the target the same: 5 – 10 mmol/l (90 – 180 mg/dl).
P19 What BOHB concentration defines “significant ketone production”? see also P.20. - thank you, we have added the statement - (most units consider serum ketones of >0.6 mmol/L significant)

“glucose status” – I suspect this means current BG concentration? - amended

P.23 insulin regimen - amended

P.25 Potassium

Here, the authors point out that it is potentially dangerous to add potassium to the IV fluids in case there is an urgent need for rapid fluid resuscitation.

For clarity, I suggest re-writing the sentence. - thank you, we have amended as you suggest

Dr C Jefferies, Dr S Hofer