Peri-operative Management of Diabetes

General Principles:

1. Where possible patients receive education regarding the importance of good glucose control relative to post-operative outcome and achieve good glucose control in the community prior to admission for surgery.
2. Patients scheduled for elective surgery should have an HbA1c < 70mmol/mol.
3. Promote self-medication where possible/appropriate
4. Avoid the use of variable rate intra-venous insulin infusions (VRIIIs - sliding scales) where possible
5. Indications for VRIIIs are poor glycaemic control and anticipated prolonged starvation (more than 2 missed meals)
6. Maintenance fluid with VRIII should be 5% glucose in 0.45% saline to prevent hyponatremia
7. Ideal capillary blood glucose (CBG) should be 6-10 mmol/L and acceptable CBG is 4-12 mmol/L.
8. Blood glucose should be measured hourly during surgery to minimise the risk of neuroglycopaenia.

Patient seen in SOPD and offered surgery – check HbA1c now if recent result is not included in GP referral letter

HbA1c is > 69mmol/mol
and/or Patient has concerning co-morbidities

→ Refer to Anaesthetic Review Clinic

→ Review at ARC. Importance of good pre- and peri-operative diabetic control re-iterated. Patient referred to community diabetic team sc-tr.sussexdiabetesenquiries@nhs.net

→ Patient reviewed in community within 2 weeks and adjustments made to diabetic medication with the aim of reducing HbA1c with in a 2 month time frame.

→ Surgery is delayed for a fixed period of 3 months during which the community diabetic team will optimise the patient's glucose control as much as it is possible to do so, patient is then listed for surgery.

HbA1c is < 70mmol/mol and there is no other reason to refer for anaesthetic review

→ Patient can be listed for surgery

Patient is admitted on the morning of surgery, for either day surgery or an in-patient stay, HbA1c < 69 mmol/mol and CBG on admission is within acceptable limits

Patient has Type II Diabetes and doesn't take insulin

Stop oral hypoglycaemics when NBM
Don't start a VRIII unless CBG is outwith acceptable limits (4-12 mmol/L)

Patient has type II diabetes and takes insulin

Continue long-acting basal insulin (reduce dose by 20%) stop short-acting or mixed insulins and check blood glucose hourly whilst NBM. Don't start VRIII unless CBG outside acceptable limits (4-12 mmol/L).

Patient has Type I diabetes

Continue Long-acting insulin (reduce dose by 20%), allow patient to manage glucose control unless they are not confident or able to do so. Monitor CBG hourly. Don't start VRIII unless CBG is outside acceptable limits (4-12 mmol/L) or starvation is prolonged.

Patient is admitted on day of surgery and most recent HbA1c is > 70mmol/mol, CBG is >12 mmol/mol on admission – **do not cancel the surgery if patient has already been through process outlined above**.

Patient has Type II DM and is due to have minor/day surgery

Monitor CBG hourly
Check for ketones
Consider 2-4 units of actrapid to lower CBG

Patient is taking insulin and or is due to have major surgery which necessitates a prolonged period of starvation (missing more than 2 meals) or insertion of prosthetic material (such as joint replacement, vascular graft)

Commence VRIII and maintenance fluids (5% dextrose or 4% dextrose in 0.18% saline @ approx 1.2mls/kg/hr). Aim to keep CBG within ideal limits (6-10 mmol/mol).
Request urgent in-patient diabetic review (on line via intranet) or bleep SpR on 8809

Updated April 2022

Pre-operative Management of Diabetes: Day of surgery

Is your patient going for surgery?

Do they have diabetes?

If HbA1c ≥ 70 mmol/mol request urgent in-patient diabetic review (on line via intranet)

Remember check blood glucose hourly Aim for CBG 6-10 mmol/L

Patient is:
- only expected to miss one meal

- CBG > 12mmol/L (on two consecutive occasions)
- Hba1c ≥ 70 mmol/mol

YES

No

Patient is taking insulin
- Continue Long-acting basal insulin e.g Lantus (reduce dose by 20%)
- Stop short-acting or mix ed insulin whilst NBM
- Allow patient to manage glucose control unless they are not confident or able to do so.

Is Patient is taking oral hypoglycaemics?
Stop oral hypoglycaemics when NBM

Commence VRIII if blood glucose is not controlled within acceptable limits and patient is not expected to resume oral intake with 2 hours

Patient is:
- expected to miss more than 2 meals (IE unlikely to resume oral intake immediately post-op)

Use a variable rate insulin infusion with maintenance fluids at 1.2mls/kg/hr
(e.g. 4% glucose in 0.18% saline)

Consider VRII if
- Patient is having a prosthesis (e.g. joint replacement, vascular graft) and has poor diabetic control

Remember to stop a VRII when the patient has returned to the ward; is eating and drinking; and has had their usual diabetes medications