Milton Keynes - Managing glucose control on steroids in Primary Care

No known diabetes
Check glucose before starting on steroids. Random capillary blood glucose over 8mmol/l needs further checking with venous blood samples for laboratory glucose to identify those at risk of new diabetes. Fasting laboratory glucose >6.1mmol/l OR random >7.8mmol/l means at risk of developing diabetes with steroids. Fasting laboratory glucose ≥ 7mmol/l or random ≥ 11mmol/l needs second check to confirm pre-existing diabetes. Suggest monitoring blood glucose levels whilst on steroids twice weekly.

Diabetes
Diet controlled or metformin alone
Reassess glucose control

Agree blood testing with patient.Test before evening mealtime.
If develops repeated high readings blood glucose >10mmol/l on >2 occasions -
-add Gliclazide 40mgs with breakfast

Assuming no hypoglycaemia symptoms:

Increase dose of Gliclazide in 40mg increments every 2-3 morning's if needed, giving up to 240 mg in morning dose.(other SU – please ask for advice

Aim for blood glucose 7 mmol/l before evening meal when only on morning dose.

Assuming no hypoglycaemia symptoms:

If above target
Consider adding evening dose of Gliclazide *gradually to a total daily dose 240 mg (160am / 80mg pm) OR change to morning insulin (as per SU guideline no.2)
*As above

If on increasing once daily steroids discuss with specialist team for advice. Treatment requirement likely to be reduced/stopped when course completed
NB: It is important to monitor BG after completion of Steroid course to ensure adjustments in medication are adequate.

Diabetes
Sulphonylurea treated
Reassess glucose control and testing regime

Assuming no hypoglycaemia Symptoms
-Adjust balance of twice daily doses of Gliclazide (other SU – please ask for advice)
-Increase dose of Gliclazide in 40mg increments every 2-3 mornings if needed, giving up to 240mg in morning dose

-Aim for blood glucose 7mmol /l before evening meal when only on morning dose
-Aim for blood glucose 10mmol/l before evening meal when on evening dose to minimise risk of overnight hypo

Assuming no hypoglycaemia symptoms:
If on maximum dose of Gliclazide (other SU – please ask for advice) will need to add insulin
-Start morning Insulatard, Humulin I or Insuman Basal at 10 units or 0. 2-0.4 units per kg per day on first day of steroids
Aim for blood glucose 7 - 10 mmol/l before evening meal

-Increase morning insulin if glucose before evening meal is above 10 mmol/l
-Increase morning insulin dose by 4 units every 2-3 days
-Review daily till stable increasing dose as needed

Consider adding Rapid acting insulin with lunch and / or evening meal, if evening meal and / or bedtime blood glucose remains elevated.
If the person with diabetes requires prandial insulin (pre meal) consider stopping Gliclazide (or other SU) and

References: Diabetes UK (2013) Diabetes and End of Life Care

Diabetes
Insulin controlled
Reassess glucose control and usual testing regime

Once daily long acting analogue (Levemir / Lantus)
I
Add in mealtime rapid acting insulin b/f breakfast and lunch
I
If they cannot have extra insulin injections, switch to an Isophane insulin

Twice daily insulin Increase: morning dose according to evening meal glucose reading.

Aim pre blood glucose below 10mmol/l before evening meal

Basal bolus insulin Increase breakfast insulin and lunchtime insulin and may need increase in daytime background insulin to prevent high evening meal readings.
Aim blood glucose below 10mmol/l before lunch and evening meal

Caution: Switch to a morning injection time & titrating dose will increase the risk of nocturnal hypos

Assuming no hypoglycaemia symptoms:
- Increase insulin if glucose before lunch or evening meal is above 10mmol/l
- Increase morning and lunchtime dose by 4 units if daily dose below 20 units, 8 units if daily dose 20-50 units, 12 units if daily dose above 50 units.
- **OR** start increments at 20% of dose
- ***Aim for blood glucose below 10 mmol/l before lunch and evening meal***
- Review daily till stable*

*Note sometimes patients are only on short course of steroids

NB: If on twice daily steroids – they may require additional increase in evening insulin

Urgent advice:
Contact the medical registrar on call at the MK hospital for urgent advice.
Non urgent advice:
If unsure at any stage about next steps or require specific advice on how to meet patient needs please contact the MKDC team
End of Life – diabetes:
Relax targets and see Diabetes UK National guidelines

Developed by SC / JP MK Diabetes Care 2014