HUTT maternity
Hutt Valley Maternity Care

HUTT VALLEY DHB

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Diabetes Requiring Steroid Therapy in Pregnancy: Management Policy

Hutt Maternity Policies provide guidance for the midwives and medical staff working in Hutt Maternity Services. Please discuss policies relevant to your care with your Lead Maternity Carer.

Purpose

To maintain good glycaemic control for pregnant woman with diabetes requiring steroid therapy.

Scope

This applies to HVDHB midwives, obstetrics medical team, Diabetes Nursing and Medical Team

Principles

- Antenatal steroids are administered to women who have a spontaneous or planned preterm birth to accelerate fetal lung development and prevent respiratory distress syndrome (NICE guidelines, 2008).
- The use of steroids in women with diabetes will increase blood glucose levels which may require an increase in insulin dose.

This treatment will apply to all pregnant women diagnosed with gestational diabetes, Type 1 Diabetes and Type 2 Diabetes (for timing refer to Appendix I).

The blood glucose levels are expected to rise from 8 hours after the steroid is administered until 24-36 hours after the second dose of steroids is given. Post steroid therapy the effect on blood glucose levels usually reduces gradually. However, the blood glucose levels can return to pre-steroid state abruptly therefore requiring a return to pre-steroid doses rapidly. Each woman must be assessed on a case by case policy.

Bethamethasone is the antenatal steroid of choice used at the HVDHB. 11.4mg Betamethasone IM, two doses usually given 24hours apart but sometimes 12 hour interval depending on clinical need. The obstetrics medical team will prescribe the steroids.

On admission to the maternity unit for steroid therapy these women will require

- Blood Glucose monitoring
- Insulin titration from the time of steroid administration to 24 hours after the second dose

The recommended blood glucose monitoring times are:

- Pre meals (before breakfast , lunch & dinner) and 2 hours post meals

Target ranges for gestational and patients with diabetes

- Pre meals Blood glucose levels 3.5-5.5mmols
- 2 hours Post meals Blood glucose levels 2hours <6.5mmols

Type 1 Diabetes

Basal/ Bolus Insulin Therapy

Step 1

- After the first steroid injection increase long acting insulin by 10% of the current total daily amount
  For example if the current dose is Lantus 15units an increase of 10% would equal a 2unit increase to 17units

Step 2

- Test blood glucose levels pre meal post steroid injection. The short acting insulin should be increased by 30%
  For example, after steroid injection next meal time is at lunch time, test blood glucose (pre meal) - if within target range no change to insulin.
  If blood glucose level (pre meal) outside target range ie.8.5mmols and the patient usually takes 12units (Novorapid) at lunch time, an increase by 30% would equal a 4unit increase to 16units

Insulin Pump Therapy

- Type 1 Diabetes Women on an insulin pump will need their basal rates increased individual based plan required important to co-ordinate with Gestational Diabetes Team

Type 2 Diabetes & Insulin Therapy, Gestational Diabetes & Insulin Therapy Initiated

Step 1

- After the 1st steroid injection increase long acting insulin by 10% of the current total daily amount
  For example if current total daily dose is Protaphane 30units an increase of 10% would equal a 3unit increase to 33units

Step 2

- Test blood glucose levels pre meal post steroid injection. The short acting insulin should be increased by 50%
  For example, after steroid injection test blood glucose (pre meal) - if within target range no change to insulin dose
  If blood glucose level (premeal) outside target range ie.8.5mmols and the patient usually takes 12 units (Novorapid) at lunchtime, an increase by 50% would equal a 6unit increase 18units (Novorapid)

Step 3

- Return doses to baseline insulin 24 hours after last dose of steroid

GDM on Diet Or Metformin Controlled

- If taking Metformin already to continue taking at current dose

Novorapid (**subcutaneously not IV**) sliding scale at Meal times

Blood Glucose Levels	Novorapid Units
6.5-8.4mmols	2units
8.5-10.9mmols	4units
11-13mmols	6units
>13mmols	8units

Women with diet controlled GDM will not know how to give insulin so will either have to be taught (Diabetes Nursing Team) or have the insulin administered for them by the ward staff.

Contact the Diabetes Nursing Team for any queries Monday – Friday 0830hours – 1630hours.

Bridget Lydon
Clinical Nurse Specialist Diabetes
Extn 9795 Pager: 727

Sioban Van der Linden
Clinical Nurse Specialist Diabetes
Extn 2544 Pager no: 422

If Diabetes Nursing Team not available between 0830 -1630 hours, page Dr Bruce, Endocrinologist, and HVDHB).

After hours contact on-call Obstetrics team

References
NICE Guidelines for Gestational Diabetes (2008)

Appendix I

Timing of administration of antenatal corticosteroids
(Most effective after 24hours up to 7 days post administration)

PPROM (23-24 consultant decision only)	23 – 33+6
Pre-term births **Multiple pregnancies** **Diabetic women on insulin[1]**	24 – 34+6
Fetal growth restriction	24 – 35+6
Elective caesarean sections	<38+6

[1] Consider extra insulin requirements

Informed Consent
The right of a consumer to make an informed choice and give informed consent, including the right to refuse medical treatment, is enshrined in law and in the Code of Health and Disability Consumers' Rights in New Zealand. This means that a woman can choose to decline treatment, referral to another practitioner, or transfer of clinical responsibility. If this occurs follow the process map on page 18 of the Referral Guidelines (Ministry of Health, 2012)