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Equality & Diversity Impact Assessed	

BGH Management of Child with TYPE I DIABETES ADMITTED FOR REVIEW OF GLYCAEMIC CONTROL

Authors and References

Dr.J.Stephen, Dr. Eunson, R. Collins & K. Forsyth. Borders General Hospital Dept of Child Health, April 2015
Adapted with thanks from RHSC Edinburgh ICP No 6 Version 5, 2015
With permission from Dr.L.Bath and Dr. K Noyes
Review date April 2018

Please complete Clerking Sheet
HISTORY

PRESENTING HISTORY
History
Reason for admission
1) Intercurrent illness

a. **Vomiting**
b. **Diarrhoea**
c. **Pyrexia**
d. **Other_____**

2)Hypoglycaemia

e. **Glucogel administered**
f. **Glucagon administered**
g. **Seizure**

Recent average 7-,14 and 30 day Blood sugars from diary or meter
Recent HbA1c
Recent weight
Previous admissions for Diabetes related illness eg DKA, Hypo's
Previous referral to Psychologist or CAMHS
Previouse contact with School Nurse

Recent Annual review Blood ,Urine ACR Blood pressure and Retinopathy screen results

CURRENT INSULIN REGIMEN:

1) Basal Bolus with carb counting and dose adjusting
Basal Insulin Dose Time
Bolus Insulin Doe Time (Ratio of insulin to g CHO, Insulin sensitivity correction factor,total daily bolus insulin)
2) Basal Bolus with fixed doses and carbohydrate consistency
3) Alternative Regimen

CURRENT INSULIN REGIMEN:

1) Basal Bolus with carb counting and dose adjusting ☐ (Please remember to use CHO count/insulin calculation sheets)
2) Basal Bolus with fixed doses and carbohydrate consistency ☐
3) Alternative Regimen ☐

A) BASAL BOLUS (carb. counting + dose adjusting) ☐

B) OTHER REGIMEN ☐

Bolus

	Insulin:CHO ratio	Correction factor	BG target
Breakfast			
Lunch			
Tea			
Supper			

Basal **Once daily** ☐ **OR** **Twice daily** ☐

	Insulin	Dose	Time
Morning			
Evening			

	Insulin and dose	Target CHO for meal (g)
Breakfast	**Dose 1 _____ __ units** **Dose 2 _____ __ units** **Dose 3 _____ __ units** **Plus Background_____ __ units** **Or Pre-mixed _____ __ units**	
Lunch	**Dose 1 _____ __ units** **Dose 2 _____ __ units** **Dose 3 _____ __ units**	
Tea	**Dose _____ __ units** **Dose 2 _____ __ units** **Dose 3 _____ __ units** **Background_____ __ units** **Or Pre-mixed _____ __**	
Supper	**Fast acting** **Dose 3 only_____ __ units** **Background_____ __ units**	

BEFORE ADMISSION DNS TO ARRANGE FOR CHILD TO BE SEEN BY DIETICIAN AND PSYCHOLOGIST WHILE ADMITTED ON WARD

WARD STAFF TO CONTACT PHYSIOTHERAPY TO ARRANGE TWICE DAILY 30-60MIN EXERCISE VISITS TO GYM WHILE ADMITTED, WITH BLOOD SUGARS DONE BEFORE AND AFTER EXERCISE

OBSERVATIONS ON ADMISSION
Glucose
Temperature
Ketones
Pulse
Capillary refill time
Respiration
Blood Pressure
Weight (plot on growth chart)

ACTIONS:
• Weigh child and plot on growth chart
INJECTION SITES:
• Identify lipohypertrophy [indicate if present + +++]
R thigh – ant - lat
L thigh – ant - lat
Abdomen
Right hip
Left hip
Right arm
Left arm
(Arms least preferred site)

DIETARY ASSESSMENT
Dietary Recommendations for Children with Diabetes
The current dietary recommendations are:
• Eat regular meals and snacks
• Include starchy carbohydrate (CHO) at EACH meal and snack
• Cut down on fat intake
• Reduce sugar intake
• Eat more high fibre foods
• Reduce salt intake
It is important to ensure that every child has eaten enough carbohydrate (see Diabetes Handbook), throughout the day to prevent hypoglycaemia and to maintain blood glucose levels. Starchy carbohydrate, e.g. bread, pasta, rice, potato and cereal, is more slowly absorbed. Therefore meals and snacks should be based on these.
The child will normally have a routine where they require regular carbohydrate approximately every 2-2½ hours.
8.00 a.m. - 8.30 a.m. Breakfast
10.00 a.m. - 10.30 a.m. Snack
12.00 a.m. - 12.30 p.m. Lunch
2.30 p.m. - 3.00 p.m. Snack
5.30 p.m. - 6.30 p.m. Tea
7.30 p.m. - 8.00 p.m. Bedtime snack
10.00 p.m. - 10.30 p.m. Additional snack if later bed time

See Sample Meal Plan in Diabetes Handbook
Sugar free juice is available on the Ward. Parents may bring in diet juice for the child, e.g. sugar free squash, diet Lilt, diet Coke.
Sugar free yogurt and fresh fruit are available from the Catering Department. The Dietitian can organise alternative meals, as required

MEAL PLAN

BREAKFAST
TIME _____

MID-MORNING SNACK
TIME _____

LUNCH
TIME _____

MID-AFTERNOON SNACK
TIME _____

EVENING MEAL
TIME _____

SUPPER
TIME _____

CHILD DIARY
To be completed by child at appropriate level

Purpose of hospital stay

_____
_____

Reasons for present diabetes control

_____
_____
_____
_____
_____
_____
_____

WARD EDUCATION

1.CHILD DOES PRACTICAL PROCEDURES

Demonstration of finger pricking device
Performed own finger prick
Use of home blood glucose meter
Drew up insulin
Practised injection technique
Performed own Injection

2.WARD DIABETES EDUCATION FOR CARERS

WHAT IS DIABETES
Cause of diabetes and what it is
Signs and symptoms
Explain Ketones
Treatment (requirement of insulin for life)

BLOOD GLUCOSE MONITORING
Reasons for testing
Acceptable range

INSULIN INJECTIONS
Short acting insulin
Background insulin
Expected dose of insulin
Corrective dose of insulin
Timing of insulin injections
Importance of ongoing supervision of injections **Supervision of injections**
Site rotation

ILLNESS
Vomiting what to do if unable to eat
Frequent check of blood glucose
Check urine for ketones (whether blood glucose high or low)
24 hour emergency help line –
PHONE BEFORE GIVING INJECTION
Emergency contact: 24 hour Ward 15 01896 826015
(Phone before giving injection)
DNS General advice line 01896 826541

HYPOGLYCAEMIA (HYPOS)
Signs and symptoms
Causes
Treatment:
mild/moderate
Severe Glucose, Hypostop, Glucagen
Hypo Flowchart
Convulsions

EXERCISE
Effects on blood glucose
Extra carbohydrate/drinks

FOOD
Healthy eating: general
reduce sugar
reduce fat

CARBOHYDRATES
Starchy high fibre
Simple sugars
Timing of meals/snacks
Increased appetite at diagnosis

DRINKS
Fruit juice, Milk, Diet/Reduced sugar

Sweets and chocolate

BLOOD GLUCOSE MONITORING

Finger pricking device
Home blood glucose meter
Home blood ketone meter

INSULIN INJECTIONS
Injection technique
Pen devices
Site rotation

Storage of insulin
Safe disposal of equipment

DAILY RECORD OF MEDICAL REVIEW

- **Review BG readings daily and adjust insulin doses accordingly until BG results are consistently 4-8mmol/L.**
- **BG readings 2 hours after Novorapid injections administered should be within target 4-8mmol/L if insulin dose correctly matches CHO intake.**

INSULIN PRESCRIBING:

Fast Acting: Humulin S/Novorapid/Humalog

- Give Expected Dose when BG 4-9.9mmol/L
- Give Corrective Dose 1 when BG 10-14.9mmol/L
- Give Corrective Dose 2 when BG 15mmol/L or higher

Background: Humulin I/Basal analogue: Levemir/Lantus

BEFORE giving insulin inform Dr on call if:

- blood ketones >1.5mmol/L

child hypoglycaemic (BG <4mmol/L either at time insulin due or within 2 hours previously)

CIRCLE ALL INSULIN DOSES GIVEN

Time of BG + Result	Ketones	Insulin Prescribed	Dose + Sig	Administered	Given By	Site
With/Before Breakfast **Time: _____** **Result: _____**		**Expected fast acting** _____ **Corrective 1** _____ **Corrective 2** _____ **PLUS Background** _____ **OR Pre-mixed** _____ **OR Morning Basal Analogue Lantus or Levemir** _____	**_____units_____** **_____units_____** **_____units_____** **_____units_____** **_____units_____** **_____units_____**	**Time:**		
With/Before Lunch **Time: _____** **Result: _____**		**Expected fast acting** _____ **Corrective 1** _____ **Corrective 2** _____	**_____units_____** **_____units_____** **_____units_____**	**Time:**		
With/Before Tea **Time: _____** **Result: _____**		**Expected fast acting** _____ **Corrective 1** _____ **Corrective 2** _____ **OR Pre-mixed** _____	**_____units_____** **_____units_____** **_____units_____** **_____units_____**	**Time:**		
With/Before Bed **Time:** **Result: _____**		**Fast acting** **Corrective 2 ONLY** _____ **PLUS Background** _____	**_____units_____** **_____units_____**	**Time:**		
Time: _____ **Result: _____**		**OR Evening Basal Analogue Lantus or Levemir** _____	**_____units_____**	**Time:**		

ADDITIONAL BG MONITORING																			
Time																			
BG																			
Ketones																			

REVIEW PRESCRIPTION FOR FOLLOWING DAY IF CORRECTIVE DOSES GIVEN