CHILDREN'S SERVICES

Guideline for Children with Newly Diagnosed Diabetes

Definition

- Fasting plasma glucose ≥ 7.0 mmol/L

or

- Random glucose > 11.1 mmol/L

Presenting Symptoms

Most children will present with the classic triad of:

- Polyuria
- Polydipsia
- Weight loss

Other common symptoms can also include:

- Secondary enuresis
- Thrush
- Lethargy
- Recurrent infections
- Abdominal pain and vomiting

Referrals

All patients should be seen the same day as soon as possible in A&E. There is no need for fasting bloods to be done.

Who to Contact

- Inform Paediatric SpR/Paediatric A&E consultant who must see patient
- Inform on call/attending consultant
- As soon as possible inform diabetes team. All new patients will need to be seen by a member of the diabetes team on the next working day.
    - Dr Bahl, Dr Day and Dr D'Cruz can be contacted via the Diabetes secretary on ext 2722
    - Paediatric Diabetes Nurse Specialists (Sophie Clarke and Maria Roberts) can be contacted via ext 3314 or 3633

Initial Investigations

- Record weight and height
- Capillary blood glucose level
- Blood ketones
- Venous bloods for:
    - Blood gas
    - Glucose
    - FBC
    - U&E
    - TFT
    - HbA1c
    - Coeliac screen and IgA*
    - Islet cell and GAD antibodies*
- Consider infection screen if patient is febrile

**Please ensure that a separate sample is taken for immunology for Coeliac Screen and Antibodies*

If this child is acidotic (pH < 7.3) then follow ICP for Diabetic Ketoacidosis

When to Consider Other Types of Diabetes

- A strong family history of diabetes
- Patient obese at presentation
- Evidence of insulin resistance (for example, acanthosis nigricans)
- Associated features, such as eye disease, deafness, or another systemic illness or syndrome

Discuss these patients with the Diabetes Team before starting insulin.

Insulin

Basal bolus or multiple daily injections (MDI) is the regimen of choice for all children. Measure blood glucose level pre-meals, 2 hours post meals/snack, pre-bed and 0200.

Prescribing Insulin

Due to problems with incorrect doses of insulin being given, the NPSA have issued guidelines for prescribing insulin. They are:
- “Units” must be written in full and not abbreviated to “U” or “IU”
- If given via a syringe then an insulin syringe must be used, not an ordinary syringe

The dose must be written in words as well as numbers and prescribed on the drug chart. This must also be documented in the paediatric diabetes in-patient chart.

Basal Bolus/MDI

Prescribe NovoRapid/Humalog pre-meals and Lantus as the background insulin.

The starting dose of Insulin should be 0.66 units/kg/day if the child has ketones and 0.5 units/kg/day if there are no ketones.

⅓ of the total dose is to be given as Lantus and the remaining ⅔ divided between the three main meals. Initially it is easier to make the meal doses the same.

Lantus should be prescribed and given prior to transfer to the ward regardless of the time. The timing of the dose can be changed later by the Diabetes team

Presentation following evening meal.

If the child is well *with no ketones or blood glucose level < 20 mmol/L with ketones* then only administer the Lantus pre bed. Continue to monitor blood glucose levels as per protocol above.

If the child is well with *ketones and blood glucose level > 20 mmol/L*, give Lantus plus 1 (one) unit NovoRapid/Humalog if child < 5 years and 2 (two) units NovoRapid/Humalog if child > 5 years.

Check blood glucose level 2 hours after NovoRapid/Humalog dose. If blood glucose level improves then continue to monitor blood glucose levels as per protocol. If no improvement in levels then discuss with Consultant.

General Information

- Insulin is administered via a pen device. Supplies are kept on Ash Ward.
- SoloStar is a disposable pen for Lantus and are kept on Ash Ward fridge.
- The child and parents should be offered a choice of Novo (NovoRapid) and Lilly (Humalog) pen devices.
- ½ unit NovoPens and Humalog Pens are available for very young children. Stores are kept in the diabetes supply box on Ash Ward
- 4mm needles are used for all children and young people.
- As soon as possible, the child and parents should monitor the blood glucose levels under supervision of the nursing staff.
- With support, children and parents are encouraged to take early responsibility for their own injections.
- Blood ketones should be checked with all capillary blood glucose checks until they are negative.
- Again, the child and parents should be responsible for these checks once they are competent.
- Prepared information packs and blood glucose meters are available. Supplies are kept on Ash Ward.

References

1. Definition and diagnosis of diabetes mellitus and intermediate hyperglycemia, WHO 2006
2. Diabetes(type 1 and 2) in children and young people: diagnosis and management, NICE NG18, August 2015, updated November 2016
3. NPSA Rapid Response Report, Safer administration of insulin, 16 June 2010. NPSA/2010/RRR013

Dr Tim Marr
Locum Associate Consultant in Paediatrics

Presented to Paediatric Clinical Guidelines Forum on 8th November 2010
Ratified by Dr Zoritch on behalf of Children's Services Clinical Governance Committee on: 8th November 2010
Updated: January 2019 by Dr S Bahl, Dr S D'Cruz and Dr E Day