CHILDREN'S SERVICES

GUIDELINES FOR CONGENITAL HYPOTHYROIDISM

BACKGROUND

Congenital hypothyroidism causes neuro-developmental delay. Although this may in part be related to low levels of thyroxine in utero, delay in diagnosis and treatment will further compound the neurological damage. Hence this is a medical emergency and must be treated as such.
NB. Secondary hypothyroidism will not be detected by the Newborn Blood Spot Screening (measures TSH) and may only present with other signs of congenital hypothyroidism eg. prolonged jaundice (thus thyroid function tests still required) .

Please inform Dr Bahl of all new cases as soon as possible on pager 8137 or via secretary on ext 2722.

CLINICAL ASSESSMENT AND INVESTIGATIONS

1. **The baby should be seen within 12-24 hours of notification of a positive screen result (TSH>20mU/l).** Contact the parents with the date of admission and explain the Newborn Blood Spot Screening result and plan for further tests.

2. Book the technetium thyroid scan with the Nuclear Medicine Department to be done within 5 days and ideally to coincide with the first assessment**.** They will need to know the baby's birth weight. The thyroid ultrasound scan will not be affected by treatment and can therefore be organised at a later date.

3. On admission, record and plot weight, length and head circumference. Do a general examination with particular attention to any dysmorphic features, jaundice or signs of infection.

4. Insert i.v cannula (if having Technetium scan). Blood taken from baby for:
   - Free T_4 and TSH
   - Anti-thyroid antibodies
   - Thyroglobulin
   - Liver function tests if jaundiced
   - Calcium profile and PTH if TSH<20

5. Blood taken from mother for:
   - Free T_4, Free T_3 & TSH
   - Anti-thyroid antibodies

In cases of borderline raised TSH (<20) on Newborn Blood Spot Screening book a thyroid USS and do bloods as above but await results before deciding on treatment.

In pre term babies with borderline TSH levels discuss management with the Consultant. Most of them are transient and will simply need to have their thyroid function monitored.

TREATMENT

Commence baby on Thyroxine 25mcg once daily once bloods have been taken. There is no need to wait for the results as adjustments to the dose can be made subsequently. The Thyroxine should be given as tablets which can be crushed and mixed with water/ milk to administer. The first dose should be given on the ward under nursing supervision.

FOLLOW UP ARRANGEMENTS

The baby should be seen in 2 weeks on Oak ward for repeat TFT's, weight and general review (Dr Bahl or Ward Registrar). Subsequently, TFT's will need to be arranged at 4 weekly intervals for the first 3 months, at 2 month intervals for the next 3 and 3 monthly between 6 and 12 months. Thereafter: 4 monthly until 2 years and 4-6 monthly afterwards.

Follow up appointments should be made in Dr Bahl's Endocrine clinic approximately a week after each blood test.

Reference:
Assunta Albanese
(Consultant Paediatric Endocrinologist, St Georges Hospital)
Charles Buchannan
(Consultant Paediatric Endocrinologist, Kings College Hospital)
Jeffrey Barron
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