Ashford and St. Peter's Hospitals
NHS Foundation Trust

Guideline for the management of Congenital Hypothyroidism

Author: Dr Mohamed Osman

Supervisor: Dr Shailini Bahl

Contact details: s.bahl@nhs.net

Guideline History		
Date	**Comments**	**Approved By**
2022 Changes	• The management should be guided throughout by the Endocrine Team • Highlighted the importance of initial assessments, in regards to history and examination. • Clarify the route management for Term/Preterm babies, with either positive or borderline screening result.	

Contents

Page

1.

Guideline for the management of Congenital Hypothyroidism

Introduction

Congenital hypothyroidism causes neuro-developmental delay. Although this may in part be related to low levels of thyroxine in utero, delay in diagnosisand 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 Endocrine team of all new cases as soon as possible.

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.

3. The thyroid ultrasound scan will not be affected by treatment and can therefore be organised at a later date.

4. Babies with CHT are more likely to have associated anomalies, particularly congenital heart defects and hearing loss, and require careful neonatal examination with particular attention to any dysmorphic features, jaundice or signs of infection.

5. A complete history, including maternal thyroid status (previous history of thyroid dysfunction, maternal anti-thyroid medications), maternal diet (for example a vegan or other low iodine diet) and family history should be obtained.

6. On presentation, record and plot weight, length and head circumference. Check the red book to make sure the hearing screening has been done, and whether passed or not.

7. 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

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

In babies >32 weeks with borderline raised TSH (>8 - <20) on Newborn Blood Spot Screening, book a thyroid USS and repeat blood as above (after 7 -10 days) but await results before deciding on treatment.

In preterm babies (<32 weeks) with borderline TSH levels, discuss management with the Consultant. Most of them are transient and will simply need to have their thyroid function monitored (ideally in 7-10 days).

TREATMENT

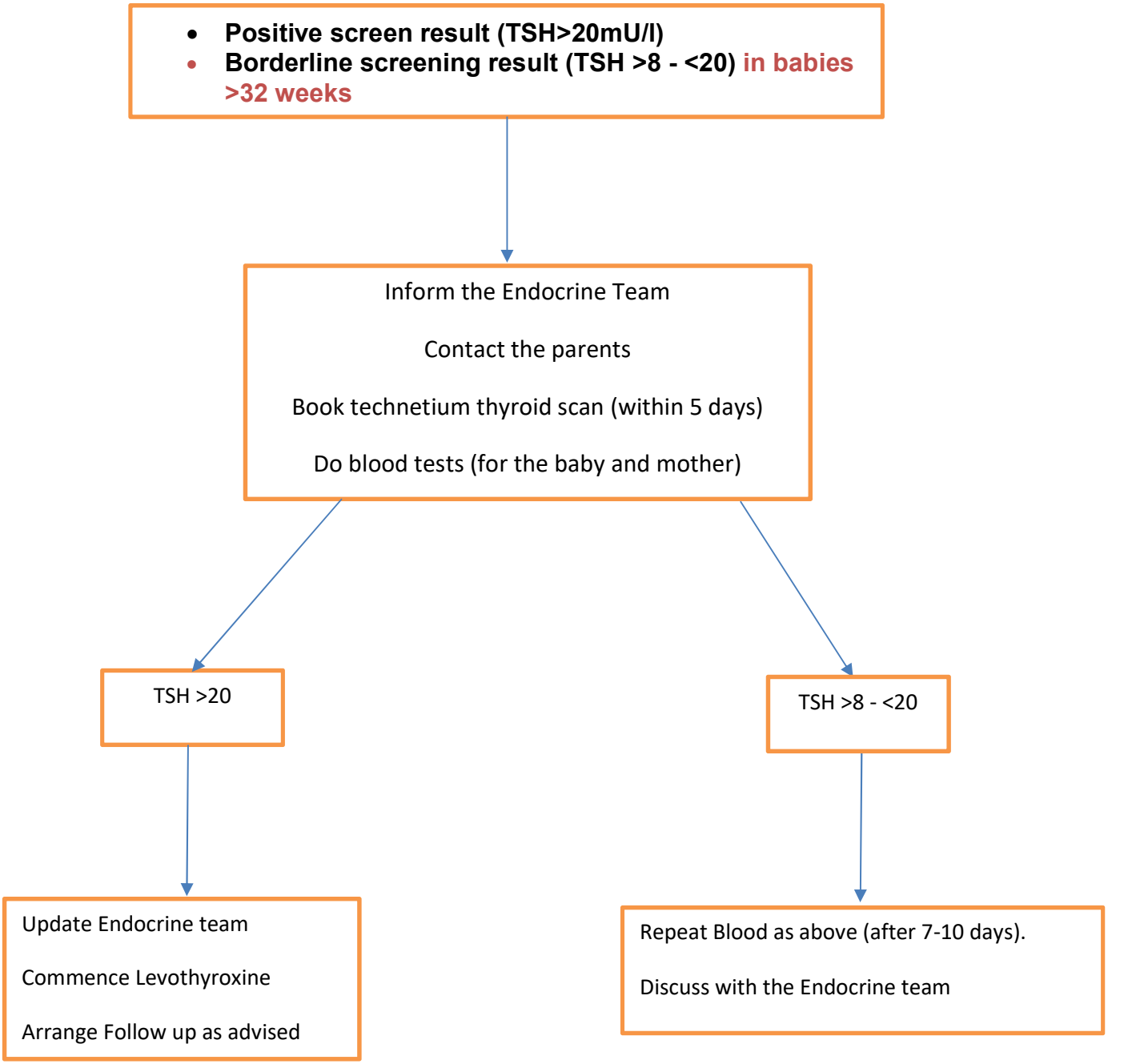
To be guided by Endocrine Team: commence baby on Thyroxine 25mcg once daily once bloods have been taken. There is no need to wait for the results as adjustments to the dose can be made subsequently. The Thyroxine should be given as tablets which can be crushed and mixed with water/ milk to administer. The first dose should be given on the ward under nursing supervision.
In some situations, the oral suspension may be preferred to tablets and the dose can range from 10 to 15 mcg/kg/day.

FOLLOW UP ARRANGEMENTS

As per Endocrine Team advice ;

- The baby should have repeat TFT's, weight and general review in 2 weeks.
- Subsequently, TFT's will need to be arranged at 4 weekly intervals for the first 3 months
- Then, at 2 month intervals for the next 3 and
- Then, 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 the next available Endocrine clinic.



- **Borderline screening result (TSH >8 - <20) in preterm baby < 32 weeks, Discuss with Endocrine Team and repeat the blood after 7-10 days.**

2. Supporting References

Congenital hypothyroidism: initial clinical referral guidelines, Public Health England, 27 March 2020.

https://www.gov.uk/government/publications/congenital-hypothyroidism-initial-clinical-referral-guidelines/congenital-hypothyroidism-initial-clinical-referral-guidelines

3. Supporting relevant trust guidelines

2. Guideline Governance

a. Scope

This guideline is relevant to all staff caring for all children from 0-18 years old across the emergency department, inpatient ward and outpatient department.

b. Purpose

i. This guidelines aims to facilitate a common approach to the management of children. At times deviation from the guideline may be necessary, this should be documented and is the responsibility of the attending consultant.

ii. This guideline is subject to regular review to ensure ongoing evidence based practice.

c. Duties and Responsibilities

All healthcare professionals responsible for the care of all children 0-18years should be aware of practice according to this guideline.

d. Approval and Ratification

This guideline will be approved and ratified by the Paediatric Guidelines Group.

e. Dissemination and Implementation

i. This guideline will be uploaded to the trust intranet 'Paediatric Guidelines' page and thus available for common use.
ii. This guideline will be shared as part of ongoing education within the Paediatric Department for both medical and nursing staff.
iii. All members of staff are invited to attend and give comments on the guideline as part of the ratification process.

f. Review and Revision Arrangements

a. This policy will be reviewed on a 3 yearly basis by the appropriate persons.
b. If new information comes to light prior to the review date, an earlier review will be prompted.
c. Amendments to the document shall be clearly marked on the document control sheet and the updated version uploaded to the intranet. Minor amendments will be ratified through the Paediatric Guidelines Group. A minor amendment would consist of no major change in process, and includes but is not limited to, amendments to documents within the appendices.

g. Equality Impact Assessment

Background • Who was involved in the Equality Impact Assessment
Dr Mohamed Osman, Dr Shailini Bahl
Methodology • A brief account of how the likely effects of the policy was assessed (to include race and ethnic origin, disability, gender, culture, religion or belief, sexual orientation, age) • The data sources and any other information used • The consultation that was carried out (who, why and how?)
All groups of staff and patients were taken into consideration and there is no bias towards or against any particular group.
Key Findings • Describe the results of the assessment • Identify if there is adverse or a potentially adverse impacts for any equalities groups
There is no evidence of discrimination.
Conclusion • Provide a summary of the overall conclusions
There is no evidence of discrimination.
Recommendations • State recommended changes to the proposed policy as a result of the impact assessment • Where it has not been possible to amend the policy, provide the detail of any actions that have been identified • Describe the plans for reviewing the assessment
This guideline is appropriate for use.

h. Document Checklist

To be completed (electronically) and attached to any document which guides practice when submitted to the appropriate committee for approval or ratification.

Title of the document: Guideline for the management of congenital hypothyroidism

Policy (document) Author: Dr Mohamed Osman and Dr Shailini Bahl

Executive Director: N/A

		Yes/No/ Unsure/NA	Comments
1.	**Title**		
	Is the title clear and unambiguous?	**Yes**	
	Is it clear whether the document is a guideline, policy, protocol or standard?	**Yes**	
2.	**Scope/Purpose**		
	Is the target population clear and unambiguous?	**Yes**	
	Is the purpose of the document clear?	**Yes**	
	Are the intended outcomes described?	**Yes**	
	Are the statements clear and unambiguous?	**Yes**	
3.	**Development Process**		
	Is there evidence of engagement with stakeholders and users?		
	Who was engaged in a review of the document (list committees/ individuals)?	**Yes**	
	Has the policy template been followed (i.e. is the format correct)?	**Yes**	
4.	**Evidence Base**		
	Is the type of evidence to support the document identified explicitly?	**Yes**	

		Yes/No/ Unsure/NA	Comments
	Are local/organisational supporting documents referenced?		
5.	**Approval**		
	Does the document identify which committee/group will approve/ratify it?	**Yes**	
	If appropriate, have the joint human resources/staff side committee (or equivalent) approved the document?	**Yes**	
6.	**Dissemination and Implementation**		
	Is there an outline/plan to identify how this will be done?	**Yes**	
	Does the plan include the necessary training/support to ensure compliance?	**Yes**	
7.	**Process for Monitoring Compliance**		
	Are there measurable standards or KPIs to support monitoring compliance of the document?	**Yes**	
8.	**Review Date**		
	Is the review date identified and is this acceptable?		
9.	**Overall Responsibility for the Document**		
	Is it clear who will be responsible for coordinating the dissemination, implementation and review of the documentation?	**Yes**	
10.	**Equality Impact Assessment (EIA)**		
	Has a suitable EIA been completed?		

Committee Approval (Paediatric Guidelines Group)			
If the committee is happy to approve this document, please complete the section below, date it and return it to the Policy (document) Owner			
Name of Chair	**Dr Claire Mitchell**	**Date**	**13/05/2022**
Ratification by Management Executive (if appropriate)			
If the Management Executive is happy to ratify this document, please complete the date of ratification below and advise the Policy (document) Owner			
Date: n/a			