PROLONGED JAUNDICE - NEONATAL CLINICAL GUIDELINE

1. **Aim/Purpose of this Guideline**
   1.1. To provide a pathway for investigation of prolonged jaundice (>2 week’s in a term infant, > 3 weeks in a preterm infant).

2. **The Guidance**
   2.1 **Background**
   In accordance with current NICE guidance and after thorough review of the supporting evidence this guideline outlines investigations required for babies with prolonged jaundice. It is important to establish whether the baby is clinically well or unwell to determine the extent of screening tests required as flowchart in section 3.
   Complete proforma section 2.2 for each patient seen.

   **History – to include:**
   - Gestation and current age
   - Feeding history i.e. type and frequency and if waking for feeds
   - Birth weight and current (recent) weight – check baby is gaining weight
   - Stool – yellow
   - Urine - colourless
   - Whether previously treatment for jaundice as an inpatient
   - Any risk of G6PD (Asian, African, Mediterranean ethnicity)

   **Examination – to include:**
   - Full systems examination. Determine clinically whether a well or unwell baby.
   - Specifically look for signs of hepatosplenomegaly.

   **Investigations:**
   - As per flowchart on guideline, including review of Newborn screening blood spot result.

   **Urines:**
   - We have decided against routinely screening for UTIs in clinically well babies with un concerning histories, as there is no evidence to support this practice¹. The other two studies references by NICE to support current guidance, also did not have any data to support an association between clinically well jaundiced neonates at 2-3 weeks of age, with urinary tract infection²,³.
2.2 History and examination

Date: ....../....../.........    Time: .........................

Dr/ANNP: ..........................................................

Parent contact details: Mob............................................ Home..................................................

History:

Gestation: ........................................... Current Age:..........................................................

Birth weight ..................g  Current weight ..............g

Feeding: Bottle (EBM/Formula) / Breast   Waking for feeds? Y / N

Treated for Jaundice as inpatient? Y / N

Vitamin K given? Y / N  Route - IM / Oral

D5 Guthrie screening test sent? Y / N

Ethnicity: .......................................................... At risk G6PD deficiency? Y / N

Stool colour ......................... Urine colour.........................

Any parental concern? Y / N Details ..........................................................................................

Examination

General condition:

CVS:

Resp:

Abdo:

- Hepatosplenomegaly? Y / N
2.3 Investigations/discharge:

As per flowchart.

If unremarkable history and clinically well baby, discharge home with advice pre-results.

Inform parents we will telephone same day if abnormal results, otherwise letter to be sent in post informing of normal results and discharge from clinic.

Results: As per flowchart

Newborn Screening result checked and normal: Y / N

Total bilirubin/conjugated: ......./........  Plotted on jaundice chart: Y / N

DAT: ......................

G6PD (if indicated): ......................

Outcome:

If normal results, send template letter to parents informing of discharge

Date sent: ...................... Letter sent by:..........................

If abnormal results, telephone parents same day and take appropriate action

Date/time called ...................... Telephoned by: ......................
Prolonged Jaundice Screen

3.0 FLOWCHART

Prolonged Jaundice Screen

Gestation

< 37/40

>/= 37/40

>/= 14 days

< 14 days

>/= 21 days

>/= 21 days

< 21 days

Concerning clinical signs/symptoms

Yes

Colourless urine

No

Yellow/green stool

Yes

Thriving

Guideline not applicable

Conjugated >/= 2.5

Split bilirubin

Group/DAT, FBC

+/- G6PD level*

Check D5 blood spot- TSH

Bristol Tel 0117 323 5560

DAT positive or G6PD positive

Conjugated >/= 25

Follow guideline for conjugated hyperbilirubinaemia

Reassure and discharge letter

Yes

Individual patient management based on clinical assessment and results

Conjugated >/= 25

DAT positive or G6PD positive

See relevant guideline

Guideline not applicable

No

- Split bilirubin
- Group/DAT, FBC
- +/- G6PD level*

*African, Asian, Mediterranean

No

- Split bilirubin
- Group/DAT
- +/- G6PD
- FBC
- TFTs
- CRP
- Urine microscopy & sugar chromatography

Yes

Reassure and discharge letter

Letter

Patient identification sticker

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Pathway for Prolonged Jaundice Screen Urine

Urine Flow Cytometry sent as per Prolonged Jaundice Screen guideline

Flow cytometry positive or urine WBC \( \geq 40 \)

Flow cytometry negative or urine WBC < 40

Repeat urine clean catch in dept within 24 hours and await 2nd flow cytometry result in dept

Flow cytometry negative or urine WBC < 40

Culture Positive

Culture negative

Mixed Growth

Pure growth

Culture positive - Mixed growth 1st sample, await 2nd sample

Culture positive - Mixed growth 2nd sample

Culture positive - Pure growth 2nd sample

Admit and start IV antibiotics as per UTI guideline

Culture positive - Pure growth 1st sample

Culture negative 1st sample

Culture negative 2nd sample

If no new clinical signs/symptoms, home & chase both MC&S results asap

Consultant decision

Not UTI

Not UTI

Check results same day & keep parents informed of results

Culture negative 2nd sample

Not UTI

Culture negative 1st sample

Culture negative

Culture negative

Mixed Growth
3. Monitoring compliance and effectiveness

<table>
<thead>
<tr>
<th>Element to be monitored</th>
<th>Key changes in practice recommended by guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>Dr Paul Munyard. Consultant paediatrician and neonatologist.</td>
</tr>
<tr>
<td>Tool</td>
<td>Audit. To be included in the Neonatal Clinical Audit Programme. Findings reported to the Child Health Directorate Audit meeting / Governance Meeting.</td>
</tr>
<tr>
<td>Frequency</td>
<td>As dictated by audit findings</td>
</tr>
<tr>
<td>Reporting arrangements</td>
<td>Child Health Directorate Audit and neonatal Clinical Guidelines meetings</td>
</tr>
<tr>
<td>Change in practice and lessons to be shared</td>
<td>Required changes to practice will be identified and actioned within 3 months of audit. A lead member of the team will be identified to take each change forward where appropriate. Lessons will be shared with all the relevant stakeholders.</td>
</tr>
</tbody>
</table>

4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the 'Equality, Diversity & Human Rights Policy' or the Equality and Diversity website.

4.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.
### Appendix 1. Governance Information

<table>
<thead>
<tr>
<th>Document Title</th>
<th>Prolonged jaundice, neonatal clinical guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Issued/Approved:</td>
<td>March 2015</td>
</tr>
<tr>
<td>Date Valid From:</td>
<td>March 2105</td>
</tr>
<tr>
<td>Date Valid To:</td>
<td>March 2018</td>
</tr>
<tr>
<td>Directorate / Department responsible (author/owner):</td>
<td>Paul Munyard, Jo Anderson Child Health. Neonatal</td>
</tr>
<tr>
<td>Contact details:</td>
<td>01872 252667</td>
</tr>
<tr>
<td>Brief summary of contents</td>
<td>This guideline is designed to provide direction on prolonged jaundice pathway for investigation and management</td>
</tr>
<tr>
<td>Suggested Keywords:</td>
<td>Neonatal. Jaundice. Prolonged. Neonate</td>
</tr>
<tr>
<td>Target Audience</td>
<td>RCHT</td>
</tr>
<tr>
<td>Executive Director responsible for Policy:</td>
<td>Executive Director</td>
</tr>
<tr>
<td>Date revised:</td>
<td>March 2015</td>
</tr>
<tr>
<td>This document replaces (exact title of previous version):</td>
<td>New Document</td>
</tr>
<tr>
<td>Approval route (names of committees)/consultation:</td>
<td>Paediatric consultants. Child Health Audit and Neonatal Guidelines meeting.</td>
</tr>
<tr>
<td>Divisional Manager confirming approval processes</td>
<td>Jan Walters</td>
</tr>
<tr>
<td>Name and Post Title of additional signatories</td>
<td>If none enter ‘Not Required’</td>
</tr>
<tr>
<td>Signature of Executive Director giving approval</td>
<td>{Original Copy Signed}</td>
</tr>
<tr>
<td>Publication Location (refer to Policy on Policies – Approvals and Ratification):</td>
<td>Internet &amp; Intranet</td>
</tr>
<tr>
<td>Document Library Folder/Sub Folder</td>
<td>Child Health/ Neonatal</td>
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</tbody>
</table>
Links to key external standards | NICE Jaundice clinical guideline 98
---|---
References:

Related Documents:

Training Need Identified? | No training needs identified

Version Control Table

<table>
<thead>
<tr>
<th>Date</th>
<th>Version No</th>
<th>Summary of Changes</th>
<th>Changes Made by (Name and Job Title)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.2.15</td>
<td>V1.0</td>
<td>Initial Issue and formatting</td>
<td>Dr J Anderson Neonatal Formatted by Kim Smith</td>
</tr>
</tbody>
</table>

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This document is to be retained for 10 years from the date of expiry.

This document is only valid on the day of printing

Controlled Document

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Appendix 2. Initial Equality Impact Assessment Form

| Name of the strategy / policy / proposal / service function to be assessed (hereafter referred to as policy) (Provide brief description): | Insertion of a neonatal nasopharyngeal airway. Clinical guideline |
| Is this a new or existing Policy? | New |
| Directorate and service area: Child Health directorate. Neonatal | |
| Name of individual completing assessment: Dr Paul Munyard | Telephone: 01872 252667 |

1. Policy Aim* Who is the strategy / policy / proposal / service function aimed at? To provide guidance on the insertion of a neonatal nasopharyngeal airway. The guidance is based at medical and nursing staff.

2. Policy Objectives* As above

3. Policy – intended Outcomes* Evidence based and standardised practice

4. *How will you measure the outcome? Audit

5. Who is intended to benefit from the policy? Neonatal patients Neonatal Medical and Nursing staff

6a) Is consultation required with the workforce, equality groups, local interest groups etc. around this policy? No. Neonatal guidelines group consultant approved guideline.

   b) If yes, have these *groups been consulted?

   C). Please list any groups who have been consulted about this procedure.

7. The Impact
Please complete the following table.

| Equality Strands: | Yes | No | Rationale for Assessment / Existing Evidence |
| Age | x | | |

Are there concerns that the policy could have differential impact on:

Prolonged Jaundice Screen 2015
| Sex (male, female, trans-gender / gender reassignment) | x |
| Race / Ethnic communities /groups | x |
| Disability - learning disability, physical disability, sensory impairment and mental health problems | x |
| Religion / other beliefs | x |
| Marriage and civil partnership | x |
| Pregnancy and maternity | x |
| Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian | x |

You will need to continue to a full Equality Impact Assessment if the following have been highlighted:
- You have ticked “Yes” in any column above and
- No consultation or evidence of there being consultation - this excludes any policies which have been identified as not requiring consultation. or
- Major service redesign or development

8. Please indicate if a full equality analysis is recommended. No

9. If you are not recommending a Full Impact assessment please explain why.

No area indicated

Signature of policy developer / lead manager / director
Dr. Paul Munyard
Date of completion and submission 12:11:2014

Names and signatures of members carrying out the Screening Assessment
1.  
2.  

Keep one copy and send a copy to the Human Rights, Equality and Inclusion Lead,
c/o Royal Cornwall Hospitals NHS Trust, Human Resources Department, Knowledge Spa, Truro, Cornwall, TR1 3HD

A summary of the results will be published on the Trust’s web site.

Signed: Kim Smith
Date: 05:05:2015
Dear

Re:

Thank you for attending our Prolonged Jaundice clinic. I am pleased to let you know that our assessment indicates that your baby's jaundice does not have a serious cause. In most cases prolonged jaundice is harmless, and due to immaturity of the body's processes for dealing with the yellow substance bilirubin. We expect that the jaundice will gradually fade and disappear over the next few weeks.

If the jaundice fades away as expected and your baby remains well, there is no need for any further follow-up in hospital. A further review would be necessary if the jaundice is not fading or is increasing, or if your baby develops dark urine, pale stools, or is not thriving. If you think your baby has any of these problems or if you have any other concerns, please seek advice from your health visitor and GP and we would be happy to arrange a further review if necessary.

Yours