

# **Assessment of Subconjunctival Haemorrhage (SCH) in Infants**

## **Guidance in the Community and Hospital Setting**

(e.g. Midwives, Health Visitors, Community Workers, GPs etc)

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## 1. Introduction

A subconjunctival haemorrhage (SCH) is a 'bruise in the eye': bleeding under the conjunctiva, the transparent layer that covers the sclera (white part of the eye). The bleeding is due to rupture and leaking of blood vessels in the conjunctiva and may occur as a result of:

- Normal birth process (birth-related event / injury)
- Non-accidental head injury

More rarely they may be caused by

- Accidental head injury
- Forceful vomiting or coughing – typically paroxysms of coughing in pertussis like illness which result in increased pressure in the intracranial area
- Bleeding disorders
- Eye infection

Subconjunctival haemorrhages are a frequent finding in otherwise healthy new-born babies and may be caused by rupture of subconjunctival vessels during vaginal delivery. The extent of the bleeding may be large or small but is always confined to the limits of the sclera. They are asymptomatic, do not affect the vision and resolve in ten to fourteen days.

All new-born babies must have their eyes examined at the first baby check (NIPE) and the following must be documented in the red book and NIPE record.

Eyes examined:           SCH seen in the right eye YES/NO  
                                  SCH seen in the left eye YES/NO



## 2. Evidence Base

These guidelines are based on review of safeguarding literature and case reports; there is little evidence or reference to natural history of subconjunctival haemorrhage in the literature. The timescale chosen are recognising that babies often do not fully open their eyes until a few days old and therefore subconjunctival haemorrhage may not be noted initially. It is felt

reasonable to expect a subconjunctival haemorrhage will be resolved by 14 days, however professional judgement should be used as this is not an absolute cut-off.

### 3. Purpose

To help professionals differentiate between a birth-related subconjunctival haemorrhage and one where there are safeguarding and health concerns and to make appropriate decisions when seeing neonates presenting with subconjunctival haemorrhage; thus avoiding unnecessary social care and hospital referrals and at the same time ensuring that cases with significant health and safeguarding concerns are not overlooked

### 4. Scope

The guideline aims to establish the assessment and management of subconjunctival haemorrhage in neonates and infants in the community setting and includes the recognition and response to safeguarding concerns which may arise when subconjunctival haemorrhage is identified. Appendix 1 details the process to be followed if the child is admitted to hospital for medical assessments.

### 5. Definitions

As per the NICE guidance on Child Maltreatment and Neglect in this guideline:

#### Consider

For the purposes of this guidance, to consider child maltreatment means that maltreatment is one possible explanation for the alerting feature or is included in the differential diagnosis.

#### Suspect

For the purposes of this guidance, to suspect child maltreatment means a serious level of concern about the possibility of child maltreatment but is not proof of it.

#### Unsuitable explanation

For the purposes of this guidance, an unsuitable explanation for an injury or presentation is one that is implausible, inadequate or inconsistent with the child or young person's:

- Presentation
- Normal activities
- Existing medical condition
- Age or developmental stage
- Account compared to that given by parent and carers
  - Between parents or carers
  - Between accounts over time.

An explanation based on cultural practice is also unsuitable because this should not justify hurting a child or young person.

**Neonate:** A baby less than 28 days old

**Infant:** A baby under twelve month's old

### 6. Risk Management (Indications and Contra-Indications/ Hazards)

Clinical guidelines are guidelines only. The interpretation and application of clinical guidelines will remain the responsibility of the individual professional. If in doubt contact a senior colleague / your safeguarding lead.

## Sub-conjunctival Haemorrhage identified in an infant

Are there any signs of life threatening illness or injury?  
Fully undress and examine the infant and look for: Irritable, lethargic, vomiting, raised fontanelle, prolonged capillary refill time, head circumference increasing across centiles, unexplained marks or injury

Yes

No

- Arrange emergency admission to hospital usually by dialling '999'
- Contact emergency department and Consultant paediatrician on call to inform of situation
- Refer to Social Care (*but do not delay referral to hospital in order to do this*) - unless advised by the Hospital that they will do this referral themselves.

- ASK:** When first noticed SCH? Did they inform anyone about the SCH? Is it documented in red book? Do the parents have photos of the child with its eyes open and the SCH? Is there any history of illness or injury? Is there a history of bleeding disorders in the child or family? Social history?
- Examine:** Fully undress and examine child for other external injuries
- Check:** Red book / Electronic record / SystmOne / Midwifery / Post-natal records for documentation about SCH or known safeguarding risks
- Consider SCIMT check or contacting MASH if unsure whether there are any other safeguarding concerns not in the available records

Red Risk Indicators	Amber Risk Indicators	Green Risk Indicators
<ul style="list-style-type: none"> <li>More than 14 days old*</li> <li>Parents have not reported and has not been recorded in red book / parental photography or other medical record</li> </ul>	<ul style="list-style-type: none"> <li>Less than 14 days old* and parents state SCH was previously reported but has not been recorded or red book not available</li> </ul>	<ul style="list-style-type: none"> <li>SCH noted at new-born check or within first few days of life / photo</li> <li>Less than 14 days old* and SCH recorded by health professional in red book or other medical record</li> </ul>
<ul style="list-style-type: none"> <li>Child, sibling or other child in the household on a Child Protection Plan</li> </ul>	<ul style="list-style-type: none"> <li>Child, sibling or other child in the household previously on a child protection plan</li> <li>Child, sibling or other child in household 'Child In Need' or subject to a pre-birth planning meeting</li> </ul>	<ul style="list-style-type: none"> <li>Not known to children's services (Social Care)</li> </ul>
<ul style="list-style-type: none"> <li>Household member / contact previously known to be a risk to children</li> <li>Parental domestic violence, significant drug / alcohol misuse, moderate mental health concerns</li> </ul>	<ul style="list-style-type: none"> <li>Low level parental drug or alcohol use, low level mental health concerns with support in place</li> <li>New or frequently changing household members</li> </ul>	<ul style="list-style-type: none"> <li>No known concerns</li> </ul>
<ul style="list-style-type: none"> <li>Other injuries or concerning marks seen on examination which are not clearly documented in red book as part of new born examination</li> <li>Features giving concern about child maltreatment (see NICE guidance)</li> </ul>	<ul style="list-style-type: none"> <li>Parents or health professional concerned child is unwell or not interacting normally</li> </ul>	<ul style="list-style-type: none"> <li>Child appears well and interacts normally with parents / carers and health professionals</li> <li>No other features giving concern of child maltreatment (see NICE guidance)</li> </ul>

First assessor follows 'Bruising In Babies' pathway as per NCSCB/NSCB procedures for a baby with an unexplained bruise (*including Social Care referral*)

Discuss all details of any concerns **same day** with Safeguarding Lead in your team / organisation or Safeguarding Lead of GP practice

Document assessment & examination in medical record, draw SCH on body map / red book. Inform GP / Health Visitor

\*14 days is an agreed cut-off, but some SCH may take longer to completely resolve, and an infant with an SCH under 14 days of age but with significant concerns may still require further evaluation.

## Additional Information:

Remember that whilst SCH may rarely be a manifestation of a bleeding disorder the combination of SCH and bruising/other bleeding in an infant should initially give rise to concern regarding non-accidental injury. Assessment and investigation for bleeding disorders is a routine part of child protection medical examination.

When examining the baby, take care to do a full head to toe inspection with the baby completely undressed and look specifically for:

- Other signs of injury including bruising, bleeding, swelling, petechial (pinprick) rash.
- Other signs of illness (is the baby coughing or vomiting?)

The baby's head circumference should be measured, documented and plotted. Check their scalp and fontanelle.

Features of shock (pallor, prolonged capillary refill and tachycardia), head injury (raised fontanelle, vomiting, irritable, changes in conscious level or muscle tone and seizures) or severe eye infection (swelling, erythema or discharge, abnormal eye movements/pupil reflexes) should all prompt urgent review in hospital. Speak to Consultant Paediatrician and if instructed to do so, transport via ambulance to the Emergency Department.

### Features giving rise to suspicion of child maltreatment in infants with subconjunctival haemorrhage

- Other bruises, marks or injuries which are not consistent with birth injury
- Report of maltreatment, or disclosure from other members of the family or third party

### Features giving rise to consider child maltreatment in infants with subconjunctival haemorrhage

- Abnormal interaction between the parent or carer and child

**Any red flag features** –Take ABC approach to ensure all clinical needs are addressed promptly to ensure stability. Refer to on-call paediatrician (see below). If there are red flag features of illness or injury. If life threatening illness/injury, call 999. Make a referral to Children's Social Care.

**If there are amber features (no red features)** – *NOTE: there is no evidence to support that a history of forceful coughing or vomiting causes SCH in young babies.*

Consider examination by the infant's GP to exclude medical causes (e.g. eye infection). If this is not possible in a timely fashion or GP review is unable to exclude a non-medical cause, then consider discussion with a senior paediatrician:

- **Queens Medical Centre**
  - Mon-Fri (9am-5pm): 0115 875 4595
  - Out of Hours: Paediatrician On Call (0115 924 9924)
- **Kingsmill Hospital**
  - Mon-Fri (9am-5pm): 01623 622515 ext. 6460
  - Out of Hours: Paediatrician On Call (01623 622515)
- **Bassetlaw**
  - Anytime: Paediatrician On Call (01909 500990)

They will advise whether further assessment is required and the urgency of any further assessment. DO NOT send the infant to the Emergency Department unless Life Threatening features or specifically instructed to do so by the Consultant Paediatrician.

**Advice may include:** Social Care referral and to be seen: often in the dedicated Non-Accidental Injury Clinic, but may be same day or next day medical assessment (by GP or Paediatrics depending on case), or other review by community health teams.

**Only green features** – document presence of SCH in record. No further action required.

**Remember to:**

- Document your findings and record conversations with parents/carers including a verbatim account of what was said.
- Record your observations on parent/carer interactions and handling of baby as well as his/her general appearance, cleanliness and clothing.
- Review all available health information in records and on electronic systems to ensure current and historical safeguarding information is not overlooked (SystemOne, child health record (red book)); unless social care involvement already known - complete a Safeguarding Children Information Management Team (SCIMT) check on all adults in the household:
  - Nottingham City: 0115 876 4730
  - Nottinghamshire County: 0115 804 1274
- Explain to parents/carers what you have found, your level of concern and what you are going to do (including MASH / Social Care referral if this is planned).

**Social Care Referral numbers:**

- Nottingham City: 0115 876 4800
- Nottinghamshire County: 0300 500 80 90 (08:30-17:00), 0300 456 4546 out of hours

**If you require further advice or support at any point please contact your Trust Safeguarding Lead or Specialist Team to seek advice.**

**Appendix 1** details the pathway to be followed when a child is admitted to hospital for further investigations

## **8. Summary**

Remember that whilst subconjunctival haemorrhage is a relatively common event which can happen during normal vaginal birth process, in a minority of cases it may also be indicative of child maltreatment. It is uncertain whether the risk of subconjunctival haemorrhage is different in instrumental or operative delivery; the mode of delivery (forceps/caesarean section) should therefore not be used as a key determinant of whether to proceed to safeguarding medical. When subconjunctival haemorrhage is observed by professionals it warrants a thorough and systematic assessment of the infant and review of all available information. The results of this assessment should then inform further action as outlined above – if in doubt discuss with your own team's Safeguarding Lead, Safeguarding Lead GP, or your local safeguarding team.

## **9. Interaction with other Policies and Procedures**

This policy should be read and used in conjunction with NICE Clinical Guidance (CG89) on When to Suspect Child Maltreatment and the Nottingham Safeguarding Children Board Child Protection procedures.

## **10. Monitoring and Review**

The implementation and effectiveness of this policy will be monitored by the Joint Nottinghamshire Safeguarding Children Partnership Group. This document will be reviewed every three years or where changes are required.

## **11. Further Guidance**

If you have any concerns or issues with the contents of this policy or have difficulty understanding how this policy relates to you and/or your role or an individual case, please speak to your Safeguarding Lead.

## **12. References**

Isolated subconjunctival haemorrhage in non-accidental trauma (Spitzer SG, Luorno J, Noel LP) JAAPOS – Feb. 2005 ([www.ncbi.nlm.nih.gov/pubmed/15729281](http://www.ncbi.nlm.nih.gov/pubmed/15729281))

## **Appendix 1**

# **Assessment of Subconjunctival Haemorrhage (SCH) in Infants**

## **Guidance in the Hospital Setting - flowchart**



Baby presents to Paediatrician with sub conjunctival haemorrhage which is not known to be a birth injury  
i.e. not recorded or noted in red book within the first few days of life or present after 14 days of life

- Document regarding potential of bleeding disorder including bleeding after surgery, delivery, immunisations or dental care in baby and family
- In baby <14 days recheck for evidence that SCH has not been previously seen within first few days of life
  - check red book / NIPE (newborn examination documentation)
  - midwife to check maternity records for documentation of SCH
  - family to be asked for any images capturing SCH within first few days of life
- Document recent history of recurrent coughing or forceful vomiting (not possetting)
  - **N.B.** There is a lack of evidence of increased frequency of SCH in babies as a result of any of these conditions
- Fully examine for other external injuries including mouth, ears and scalp
- Examine for features of eye infection as cause for sub conjunctival haemorrhage
  - Arrange Ophthalmology review if infection or other eye abnormality suspected

- Likely medical diagnosis
- Further information (maternity record, red book, family) confirms birth-related event highly likely
- No other external injuries other than those documented as birth injuries

Yes

No

Investigate medical diagnosis if appropriate

Refer to social care if not already done

Medical Diagnosis or birth-related unlikely

Medical diagnosis or birth-related event / injury likely

- Blood tests (consider at least 1st line for bruising in all)
  - Coagulation screen: PT / INR / aPTT Thrombin Time, Fibrinogen (Claus)
  - FBC and film (and mean platelet volume if thrombocytopenic)
  - Factor VIIIc, Von Willebrand factor (VWF antigen and VWF activity)If family history or 1st line blood abnormal discuss 2nd line blood tests with haematologist

- Skeletal Survey
- CT Head
- Ophthalmology

Share findings and opinion at Strategy Meeting and contribute to multi agency risk assessment & plan

Explain findings to parents  
Liaise with midwife / health visitor /GP / Social Care if referral has been made earlier by Community