

Guideline for subconjunctival haemorrhages in non-mobile infants

Version 1	Ratified	January 2022
Version 2	Updated	May & July 2022
Version 3	To be reviewed	July 2024

Aim

The aim of this guidance is to inform professionals of what actions to take when they see a subconjunctival haemorrhage in a non-mobile infant.

Introduction

A subconjunctival haemorrhage (SCH) is bleeding occurring in the white of the eye. SCHs can be small and discrete or can cover the whole eye. They can occur in one or both eyes. A SCH is caused by rupture of blood vessels under the surface of the eye.



Causes of subconjunctival haemorrhages

For the majority of SCHs, the cause is not known. SCHs can be caused by raised pressure in the eye, which is usually the result of pressure to the neck or chest. This increased pressure in the eye can be caused by labour and a severe cough or persistent vomiting. SCHs can also be caused by direct injury to the eye and can be associated with infections.

Subconjunctival haemorrhages in non-mobile infants

One large study found that 1.4% of newborns had a SCH¹. A smaller study found SCHs in 0.2% of babies aged 6 weeks². Babies may not open their eyes fully until they are a few days old, and the SCH may not be noticed straight away, especially if it is toward the outside of the eye.

The majority of SCHs in non-mobile infants occur at or within a few days of birth and are considered to be due to the labour. They can occur in infants delivered by caesarean section where labour had started or there was evidence of fetal distress. SCHs that arise sometime after birth (14 days after birth is standard) are considered not to be due to birth and another cause should be sought.

Abuse as a cause of subconjunctival haemorrhages

There are reports of SCHs occurring in non-mobile infants which are caused by inflicted injury. The mechanisms are probably similar to those above e.g. pressure on neck and/or chest or direct trauma to the eye. Direct trauma would be expected to cause bruising around the eye, but this bruising can disappear before the SCH resolves.

It is important that infants who are abused are recognised and safeguarded which is why it is important to consider whether a SCH in a non-mobile infant may be inflicted.

The evidence base

There is little research evidence that helps determine the prevalence, natural history or causes of subconjunctival haemorrhage in infants. For example, there is much less research than there is for skin bruising to help us know when to suspect child abuse. Therefore, careful clinical judgement is needed when deciding whether to implement the bruising and injury protocol for subconjunctival haemorrhages. The flowchart below is based on limited research evidence. It may change as more research is published.

¹ Li L-H et al. Findings of perinatal ocular examination performed on 3573, healthy full-term newborns. *Br J Ophthalmol* 2013;97:588–591.

² Ma Y et al. Universal ocular screening of 481 infants using wide-field digital imaging system. *BMC Ophthalmology* 2018;18:283

Flowchart for management of subconjunctival haemorrhages (SCH) in non-mobile infants

Subconjunctival haemorrhage (SCH) in a non-mobile infant. Seek advice from seniors as needed.

Ask when the SCH was first noticed + if it is documented. Check the NIPE record to see if the SCH/s have been documented as birth injuries. Consider phoning hospital midwives or on-call neonatology registrars to look at the NIPE record if the information is not in the PCHR. If none of these show the SCHs but they are seen on family photographs clearly taken at or near birth, these would count as documentation. **If the SCH/s you are seeing have been documented previously and there are no other concerns, no further action is needed.**

Document any explanations for the SCH as verbatim as possible. Ask about apnoea's, floppiness, or loss of consciousness, as these would indicate that urgent paediatric assessment is needed. Consider the social history and any safeguarding risks (check available records, consider requesting MASH information if you are unsure)

Check the baby head-to- toe, unclothed to look for any obvious injuries including pin-point bruises on the upper body (e.g. on eyelids, or around the mouth, nose or neck) and any signs of bleeding e.g. from the nose or mouth

Are there any other injuries seen or any reports of maltreatment?

No

Yes

Is a medical condition suspected?

Yes

No

Obvious medical cause is unusual. If there is e.g. a history suggestive of bleeding disorder, forceful coughing or vomiting, eye infection (acute red eye swelling, discharge, redness) - discuss with the hospital Paediatric Consultant whether child needs to be seen in hospital and/or whether a MASH referral is needed

Yes

Is the infant under two weeks old?

No

Are the subconjunctival haemorrhages large, multiple or in both eyes?

Yes

No

Are there significant social risk factors e.g., child on a child protection plan, ongoing concerns about domestic abuse, substance misuse or mental health problems

Yes

No

Document SCH in health records and PCHR.
No further action required

Follow the HIPS bruising and other injury protocol¹. Document findings. Ask parents to take photographs if appropriate

Refer to MASH immediately

¹<https://hipsprocedures.org.uk/qkyoz/children-in-specific-circumstances/bruising-in-infants-who-are-not-independently-mobile>