

Subgaleal Haemorrhage (SGH) Clinical Guideline

V1.0

September 2026

Summary

Subgaleal haemorrhage (SGH) is a rare neonatal condition caused by bleeding into the subgaleal space. It has the potential to deteriorate rapidly because this space can hold a large volume of blood before the scalp swelling appears dramatic.

Diagnosis is primarily clinical and must not be delayed for imaging. Prompt neonatal review, clear physiological monitoring and early correction of blood loss and coagulopathy are the central safety actions.

Key actions:

- Recognise diffuse, boggy or fluctuant scalp swelling that crosses suture lines; attempted or successful vacuum extraction is a recognised risk factor.
- For suspected SGH, obtain urgent senior neonatal review, admit to the neonatal unit (NNU) and plan for at least 24 hours of NNU observation. A consultant may document an alternative plan only in specific circumstances.
- Use continuous heart rate, respiratory rate and oxygen saturation monitoring. Record vital signs, including blood pressure, every 15 minutes during initial assessment or resuscitation, then hourly for at least 4 hours once stable.
- Confirm that vitamin K has been administered and arrange urgent blood tests, group/crossmatch and IV (intravenous) access.
- If shock, acidosis or clinical deterioration are present, use blood products as first-line volume replacement where clinically indicated. Give red cells in 10 mL/kg aliquots and do not give saline.
- Stable babies may continue enteral feeding. Intravenous fluids should not be used routinely and antibiotics should not be prescribed unless there is another clear indication.

Subgaleal Haemorrhage (SGH): Recognition and Neonatal Management

Diagnosis is clinical- do not delay management for imaging.

Suspected SGH.

- Diffuse, boggy or fluctuant scalp swelling crossing suture lines.
- Enlarging or gravity- dependent swelling, or systemic signs of blood loss.

Immediate neonatal actions:

- Urgent senior neonatal review and admission to NNU.
- Continuous heart rate, respiratory rate and oxygen saturation monitoring.
- Record vital signs, including blood pressure, every 15 minutes during initial assessment or resuscitation.
- IV access; urgent FBC, coagulation, group/ crossmatch and blood gas with lactate.
- Confirm that vitamin K has been administered.

Shock, acidosis or clinical deterioration?

Also consider falling BP/ Hb, rising lactate, worsening perfusion, neurological change or expanding swelling.

No- clinically stable.

Stable neonatal care.

- Once stable, record vital signs including blood pressure hourly for at least 4 hours.
- Reassess scalp and head circumference at least hourly for the first 4 hours.
- Stable babies may continue enteral feeding.
- Do not use IV fluids routinely.
- Do not prescribe antibiotics unless another clear indication exists.

Yes / concern.

Resuscitation and escalation.

- Use blood products as first line volume replacement where clinically indicated.
- Give red cells 10mL/kg aliquots and reassess after each aliquot.
- Consider the Major Haemorrhage Protocol where clinically appropriate.
- Contact the transfusion laboratory early.

Reassess and continue monitoring.

- Return immediately to 15 minute vital sign and blood pressure monitoring if deterioration occurs.
- Repeat FBC, coagulation and blood gas/ lactate at 4 to 6 hours, or sooner if clinically indicated.
- Monitor urine output, bilirubin, perfusion and neurological state.
- Keep the baby on NNU for at least 24 hours; any exception requires consultant review and documented plan.

Blood product selection and administration must follow RCHT neonatal/ paediatric transfusion policies and the major haemorrhage protocol.

1. Aim/Purpose of this Guideline

1.1. This guideline applies to neonatal, paediatric, midwifery, obstetric, theatre/recovery, emergency, NNU and maternity staff involved in the recognition, escalation and neonatal management of babies with suspected subgaleal haemorrhage.

1.2. This version supersedes any previous versions of this document.

Data Protection Legislation

The Trust must comply with the UK GDPR, Data Protection Act 2018, and Data (Use and Access) Act 2025 by ensuring all personal data is processed lawfully, fairly, transparently, and for a defined purpose.

Before processing personal data, an appropriate Article 6 UK GDPR lawful basis must be identified and recorded. Where special category data is involved, a relevant Article 9 condition must also be documented.

All staff, contractors, students, volunteers, agency workers, and third parties working on behalf of the Trust are responsible for complying with data protection legislation.

Further guidance is available in the Trust's Information Use Framework and Information Governance policies. Advice can also be obtained from the Information Governance Team.

2. The Guidance

2.1. Background and Potential for Deterioration.

SGH has the potential to cause a rapid clinical deterioration. Significant blood loss can occur into the subgaleal space before external swelling looks dramatic. Diagnosis is clinical and management should not be delayed for imaging.

2.2. Recognition and Clinical Signs.

Suspect SGH when there is diffuse, boggy or fluctuant scalp swelling that crosses suture lines. The swelling may enlarge, move or shift with gravity. Assess the scalp in good light and remove hats or other coverings.

Picture-based and bedside identification points:

- Swelling that crosses suture lines supports SGH; a cephalohaematoma is usually limited to one skull bone.
- Diffuse, movable, fluctuant or ballotable swelling supports SGH, especially when it shifts with gravity.
- For the occipital manoeuvre, gently lift the head forward and assess whether posterior swelling can be moved forwards; free movement supports SGH.

- Periorbital oedema, displacement of the ears or increasing head circumference are concerning signs. An increase in head circumference may be a late sign.

Systemic signs suggesting blood loss or shock include:

- Tachycardia or a rising heart rate.
- Tachypnoea or increased work of breathing.
- Pallor, poor perfusion or central capillary refill greater than 3 seconds.
- Low or falling blood pressure.
- Falling haemoglobin or haematocrit.
- Metabolic acidosis or rising lactate.
- Reduced activity, seizures or other neurological dysfunction.

2.3. Differential Diagnosis.

Use the appearance and distribution of scalp swelling to distinguish SGH from more localised birth-related swelling. The image below should be used alongside clinical examination.

- SGH: diffuse, fluctuant swelling that crosses suture lines and may enlarge or shift with gravity.
- Cephalohaematoma: subperiosteal bleed limited by suture lines.
- Caput succedaneum: oedematous scalp swelling with distinct borders; usually not fluctuant and does not enlarge.
- Chignon: artificial caput limited to the vacuum cup site.

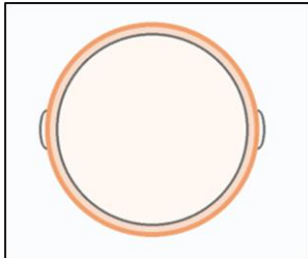
See image on following page.

Neonatal scalp swelling: key differences.

Use alongside clinical examination.

SGH.

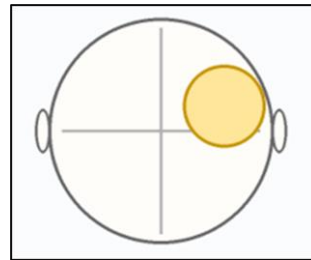
Bleeding into subgaleal space.



- Crosses suture lines.
- Diffuse, boggy and fluctuant.
- May enlarge or shift with gravity.

Cephalohaematoma.

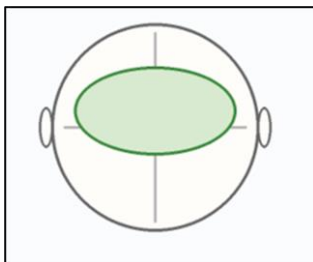
Subperiosteal bleed.



- Limited by suture lines.
- Usually well circumscribed.

Caput succedaneum.

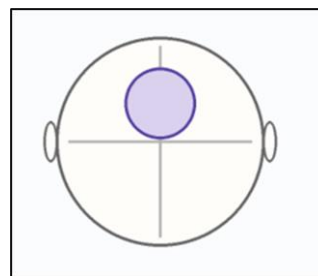
Scalp oedema.



- Distinct borders.
- Usually not fluctuant.
- Does not enlarge.

Chignon.

Vacuum cup swelling.



- Limited to the cup size.
- Usually resolved spontaneously.

Images created by Mohammed Elrayes.

2.4. Simplified Risk Factors.

Attempted or successful vacuum extraction is a recognised risk factor for SGH. Difficult instrumental birth, prematurity and coagulopathy may also be associated. Risk factors do not replace clinical assessment and should not be used to create complex risk categories or to delay escalation when SGH is suspected.

2.5. Immediate Neonatal Management and Admission.

When SGH is suspected:

- Obtain urgent senior neonatal review.
- Admit to NNU and plan for at least 24 hours of observation. Most suspected cases are best managed on NNU.
- Establish IV access; two peripheral cannulae or umbilical access may be required if the baby is unstable.
- Commence continuous heart rate, respiratory rate and oxygen saturation monitoring.
- Record vital signs, including blood pressure, perfusion, activity and temperature, every 15 minutes during the initial assessment or resuscitation, then hourly for at least 4 hours once stable. Document scalp findings and head circumference.
- Confirm and document that vitamin K has been administered.
- Keep the baby warm and prepare for blood product resuscitation if there are signs of hypovolaemia.

For a very late-presenting baby who is clinically well, a consultant may agree an alternative to routine NNU admission or may reduce the intensity of monitoring. This requires direct consultant review, a documented rationale, a clear observation plan and explicit escalation criteria.

2.6. Monitoring and Escalation Requirements.

Monitoring for suspected SGH should include:

- Continuous heart rate, respiratory rate and oxygen saturation monitoring.
- Record vital signs, including blood pressure, every 15 minutes during initial assessment and active resuscitation; once stable, record them hourly for at least 4 hours. Further frequency should be set by the consultant and documented.
- Return immediately to 15 minute vital-sign and blood pressure monitoring if there is any deterioration or renewed concern.

- Scalp examination and head circumference at least hourly for the first 4 hours, then at least 4-hourly until clearly stable; assess sooner if the swelling appears to enlarge.
- Colour, perfusion/capillary refill, activity, neurological state, temperature and urine output with each observation set.
- Repeat FBC (full blood count), coagulation profile and blood gas/lactate at 4 to 6 hours, or sooner if clinically indicated.

Escalate immediately to the neonatal consultant and increase monitoring if there is shock, acidosis, rising lactate, low or falling blood pressure, falling haemoglobin, worsening perfusion, enlarging scalp swelling or head circumference, respiratory compromise, neurological change or any other clinical deterioration.

2.7. Investigations.

Arrange urgent investigations while assessment and resuscitation proceed:

- FBC.
- Coagulation profile.
- Group and crossmatch.
- Capillary or venous blood gas including lactate and base excess.
- Electrolytes and blood glucose.
- Bilirubin/SBR (serum bilirubin) monitoring because jaundice risk is increased.

Imaging may be useful later to assess complications but should wait until the baby is clinically stable.

2.8. Resuscitation and Volume Replacement.

Suspected acute blood loss from SGH should be treated with blood products as first-line volume replacement where clinically indicated.

- Give red cells in 10 mL/kg aliquots and reassess after each aliquot. Repeat or add other blood products according to the clinical response, coagulation results, consultant advice and the local Major Haemorrhage Protocol.
- Do not give normal saline or other crystalloid boluses for SGH-related hypovolaemia.
- Take group/crossmatch samples before emergency blood is given where this can be done without delaying resuscitation, and contact the transfusion laboratory early.

Blood product selection, emergency issue, administration and observation requirements must follow the current RCHT [Blood Transfusion for Neonates Policy](#) and [Blood Transfusion for Children Policy](#).

2.9. Consideration of the Major Haemorrhage Protocol.

Consider the Major Haemorrhage Protocol where clinically appropriate; it should not be activated automatically solely because SGH is suspected. Triggers for consideration include shock, acidosis, ongoing or suspected significant bleeding, falling haemoglobin, worsening coagulopathy or clinical deterioration despite initial treatment.

- Notify the transfusion laboratory early and follow the current local protocol.
- Do not reproduce component ratios, laboratory targets or step-by-step protocol content within this guideline; use the current Major Haemorrhage Protocol and transfusion policies.
- Continue frequent reassessment and repeat blood gas, FBC, coagulation profile and electrolytes according to clinical need and the protocol.

2.10. Ongoing Care, Associated Injuries and Follow-Up.

Most babies with suspected SGH should remain on NNU for ongoing observation for at least 24 hours. A consultant may document a different plan for a very late-presenting, clinically well baby where this is proportionate and safe.

- Stable babies may continue enteral feeding.
- Intravenous fluids should not be used routinely.
- Antibiotics should not be prescribed unless there is another clear indication.
- Monitor for jaundice, coagulopathy, hypoxic ischaemic encephalopathy, intracranial haemorrhage, subdural haematoma, skull fracture, raised intracranial pressure and neurological dysfunction.
- Arrange neuroimaging once stable if intracranial injury is suspected and involve neurosurgery or other specialist services where indicated.

2.11. Take-Home Message

SGH is a clinical diagnosis with the potential to deteriorate rapidly. The key actions are prompt recognition, urgent senior review, NNU admission and observation for at least 24 hours in most cases, vital signs including blood pressure every 15 minutes during initial assessment or resuscitation and hourly for at least 4 hours once stable, confirmation of vitamin K, blood products rather than saline for clinically significant blood loss, and consideration of the Major Haemorrhage Protocol when shock, acidosis or clinical deterioration is present.

3. Monitoring compliance and effectiveness

Information Category	Detail of process and methodology for monitoring compliance
Element to be monitored	Recognition, monitoring, escalation and neonatal management of babies with suspected or confirmed SGH. This includes documentation of clinical findings, vital-sign and blood pressure frequency, head circumference where indicated, investigations, NNU admission and at least 24 hours of observation unless a consultant documents an alternative plan, escalation, vitamin K confirmation and treatment.
Lead	Audit and guidelines lead.
Tool	Trust reporting via Formic.
Frequency	Audit at least annually and after each confirmed SGH case or serious incident. Immediate multidisciplinary case review should follow confirmed SGH, significant clinical deterioration or use of the Major Haemorrhage Protocol.
Reporting arrangements	Findings to be reported to neonatal/maternity governance and relevant care group governance meetings. Reports should identify omissions, delays, themes and required actions, with discussion documented in meeting minutes.
Acting on recommendations and Lead(s)	Neonatal Audit and Guidelines Group.
Change in practice and lessons to be shared	Required changes to practice will be identified, actioned within agreed timeframes and shared with neonatal, maternity, obstetric and NNU staff through safety briefings, teaching, guideline updates and governance feedback.

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 and Inclusion Policy](#) or the [Equality and Diversity website](#).

4.2. Quality and Equality Impact Assessment (QEIA)

The QEIA process allows RCHT to monitor the impact of changes to its policies and services, ensuring that nobody is unduly disadvantaged. The Quality and Equality Impact Assessment (QEIA) Form is available via the link in [Appendix 2](#).

Appendix 1. Governance Information

Information Category	Detailed Information
Document Title:	Subgaleal Haemorrhage (SGH) Clinical Guideline V1.0
This document replaces (exact title of previous version):	New Document
Date Issued/Approved:	September 2026
Date Valid From:	September 2026
Date Valid To:	September 2029
Directorate/Department responsible (author/owner):	Donna Sellick; Neonatal Consultant. Mohammed Elrayes; Paediatric Specialty Trainee.
Contact details:	01872 252667
Brief summary of contents:	Summary guideline for neonatal subgaleal haemorrhage: simplified risk factors, picture-based recognition, neonatal monitoring, admission, investigations, blood product resuscitation, consideration of the Major Haemorrhage Protocol, associated injuries and follow-up.
Suggested Keywords:	Subgaleal haemorrhage; SGH; potential to deteriorate; vacuum extraction; instrumental delivery; hypovolaemic shock; Major Haemorrhage Protocol; NNU; neonatal resuscitation.
Target Audience:	RCHT: Yes CFT: No CIOS ICB: No
Executive Director responsible for Policy:	Chief Medical Officer
Approval route for consultation and ratification:	Neonatal Audit and Guidelines Group
Manager confirming approval processes:	Caroline Chappell
Name of Governance Lead confirming consultation and ratification:	Michael Cross
Links to key external standards:	None required

Information Category	Detailed Information
Related Documents:	Blood Transfusion for Neonates Policy ; Blood Transfusion for Children Policy ; current RCHT Blood Transfusion Policy and local Major Haemorrhage Protocol.
Training Need Identified?	Yes. Staff involved in instrumental delivery, newborn observation and neonatal management should be familiar with SGH recognition, monitoring, escalation, admission, blood product resuscitation and consideration of the Major Haemorrhage Protocol.
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet and Intranet
Document Library Folder/Sub Folder:	Clinical / Newborn Care

Version Control Table

Date	Version Number	Summary of Changes	Changes Made by
August 2026	V1.0	Initial issue.	Donna Sellick; Neonatal Consultant and Mohammed Elrayes;

All or part of this document can be released under the Freedom of Information Act 2000.

All Policies, Strategies and Operating Procedures, including Business Plans, are to be kept for the lifetime of the organisation plus six years.

This document is only valid on the day of printing.

Controlled Document.

This document has been created following the Royal Cornwall Hospitals NHS Trust [The Policy on Policies \(Development and Management of Knowledge Procedural and Web Documents Policy\)](#). It should not be altered in any way without the express permission of the author or their Line Manager.

Appendix 2. Quality and Equality Impact Assessment (QEIA) Form

The QEIA process allows RCHT to monitor the impact of changes to its policies and services, ensuring that nobody is unduly disadvantaged.

Please ensure you have completed a Quality and Equality Impact Assessment (QEIA) using this link to complete the form:

[E11 QEIA Policy](#)

For guidance, please see the [QEIA Essentials – Quick Reference Guide](#) or contact as required below:

Equality, Diversity and Inclusion guidance, please contact: rcht.inclusion@nhs.net

Quality Governance guidance, please contact Jillian Tozer: jillian.tozer3@nhs.net