

Neonatal procedure for the care of a baby who requires phototherapy

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Key Documents Owner:	Dr Vivianna Weckemann Consultant Paediatrician
Approved by:	Neonatal Guidelines Review Meeting
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Date of Review: This is the most current version and should be used until a revised document is in place	11 th November 2025

Key Amendments

Date	Amendments	Approved by
November 2022	Document approved for 3 years with no amendments	Dr Gregory/ Neonatal Guidelines Review Meeting

This pathway is for the Jaundiced baby requiring phototherapy. The treatment to reduce unconjugated bilirubin levels is extra fluids and phototherapy. The method used will depend on the actual level of bilirubin and how rapidly this rose, as well as the clinical condition, gestation, age in hours and the weight of the infant.

Equipment

- Phototherapy unit/Biliblanket/Bilibed
- Eye cover
- Thermometer/Tempadot
- Specimen pot
- Jaundice chart

Procedure

- Explain to parents the causes for jaundice and the need for adequate hydration and/or phototherapy, to allay any fears and worries. If possible, use the bilibed on the post natal ward.
- It is important to maintain **normal** hydration and nutrition of the jaundiced newborn infant. This may be achieved by the encouragement of breastfeeding, the provision of additional oral fluids or may require the intravenous administration of fluid. There is no evidence to support the administration of excessive quantities of fluid and most infants will not need extra fluids.
- If baby is receiving overhead phototherapy, baby will require eye protection either tinted shield or eye shield. Radiation from this light band has been shown to cause retinal damage.
- Baby needs to be nursed exposed, without clothes or nappy, this is to ensure optimum treatment from phototherapy.
- Incubators should be set in the correct thermoneutral range and the baby's axilla temperature monitored regularly 3-4 hourly. Light at this wavelength does not emit much heat and the exposed infant can get cold.
- Remove all vernix, oil and lotions from the skin prior to commencement of phototherapy. Skin care using warm water should be performed at "all care" times as deposits of bile salts in the skin can cause irritation and itching – redness and inflammation can occur.
- Consider obtaining a urine specimen for Micro Culture and Sensitivity, ward testing/reducing substances to ensure cause of jaundice is not urine infection or galactocaemia
- Turn baby regularly to ensure equal distribution
- Teach parents how they can interact with their baby

Documentation

- Chart bilirubin result on neonatal jaundice chart
- Record presence and type of phototherapy on baby care charts
- Plan timing of next serum bilirubin estimation

Blue Light Phototherapy by Halogen Lamp

- Heat is generated by the radiant lamp and is removed by an axial fan. A thermal cut out switch turns off the lamp if the fan fails therefore it is important that the fan is switched on first before the lamp and left on all the time whilst the unit is in use. When the unit is no longer required, then the fan must be switched off after the lamp is switched off
- The lamp itself is extremely bright and takes 3 minutes to achieve maximum output. If the lamp is switched off it should not be switched on for at least 10 minutes otherwise it may not ignite
- The blue light gives the baby a mottled greyish appearance and care should be taken to assess the baby's condition accordingly
- Glare from the lamp can be difficult to work with. Using green sheets can reduce it. Particular care should be taken to cover the baby's eyes

References

- Kelnal C., Harvey D., Simpson C. (1995) The Sick Newborn Baby third edition London: Bailliere Tindall
- Boxwell G. (2000) Neonatal Intensive Care Nursing: Routledge
- Mupandemund R., Watkinson M. (1999) Key Topics in Neonatology – Bios Scientific Publishers
- Levene M., Tudehope D., Thearle M. (2000) Essentials of Neonatal Medicine third edition London: Blackwell Science Ltd

Monitoring Tool

- How will monitoring be carried out? Audit of records
- When will monitoring be carried out? Before review of current guideline
- Who will monitor compliance with the guideline? SCBU/NNU staff

STANDARDS:

Item	%	Exceptions
Appropriate recording of serum bilirubin result	100%	
Appropriate management undertaken where serum bilirubin abnormal	100%	

Contribution List

Key individuals involved in developing the document

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Circulated to the following individuals for comments

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All Consultant Paediatricians	

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Name	Committee / group
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