PHOTOTHERAPY TREATMENT AT HOME

This LOP is developed to guide clinical practice at the Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this LOP.

1. AIM
   • To ensure neonates that require phototherapy receive treatment safely in their home environment
   • Appropriate use of the phototherapy mat to provide phototherapy for neonates safely in their home environment

2. PATIENT
   • Neonates that are being managed at home by Royal Hospital for Women Midwifery Support Programme (MSP) / Midwifery Group Programme (MGP)

3. STAFF
   • Registered Midwives
   • Paediatric team

4. EQUIPMENT
   • Phototherapy mat and machine (BiliSoft)
   • Disposable covers for phototherapy mat and machine (BiliSoft)

5. CLINICAL PRACTICE
   • Assess the neonate’s jaundice level including Transcutaneous Bilirubin (TcB) and Serum Bilirubin (SBR). If required, home visiting midwife should take a heel prick blood sample to assess the baby’s SBR daily, collect 0.8ml in a yellow top funnel tube, protect from light and deliver blood sample to laboratory as soon as practical
   • Document the baby’s SBR results on the “Jaundice Treatment Thresholds – ≥38 week gestation” graph (refer to Appendix 1)
   • Discuss with the paediatric team if baby requires phototherapy and is appropriate for treatment at home, the home visiting midwife is to organise phototherapy at home
   • Educate the parents about the signs and symptoms of jaundice and phototherapy treatment
   • Provide parents with information leaflet “Jaundice babies – an information sheet for parents” (refer to Appendix 2)
   • Offer the parents the opportunity to discuss jaundice and phototherapy with paediatric team
   • Educate and demonstrate to parents the appropriate use of the phototherapy mat
   • Provide parents with information leaflet “How to use BiliSoft” (refer to Appendix 3) which is also laminated and attached to BiliSoft machine
   • Provide contact details and encourage parents to ring midwife or hospital if they have any concerns about baby or phototherapy treatment
   • Review baby’s condition daily. Home visiting midwife to attend to the baby’s SBR daily and consult with paediatric team regarding baby’s jaundice management
   • Discuss with parents the baby’s jaundice management accordingly
   • Document the treatment in baby’s Personal Health Record book (Blue Book)
   • Collect the phototherapy mat after treatment is no longer required

6. DOCUMENTATION
   • “Jaundice Treatment Thresholds – ≥38 week gestation” graph
   • Jaundice babies – an information sheet for parents
   • “How to use BiliSoft” information leaflet
   • Personal Health Record book (Blue Book)
   • Integrated clinical notes
PHOTOTHERAPY TREATMENT AT HOME  cont'd

7. EDUCATIONAL NOTES
   • Jaundice is one of the most common conditions requiring medical attention in newborn babies
   • Approximately 60% of term and 80% of preterm babies develop jaundice in the first week of life and about 10% of breastfed babies are still jaundiced at one month of age
   • While the cause of jaundice in most cases is physiological, co-existing pathological causes need to be identified because they often have serious consequences if left untreated

8. RELATED POLICIES / PROCEDURES / CLINICAL PRACTICE LOP
   • Phototherapy
   • Jaundice
   • Transcutaneous Bilirubinometer (TcB) – Procedures for use

9. REFERENCES
   2 Neonatal Jaundice. UK NICE Guidelines May 2010. UK National Collaborating Centre for Women's and Children's Health. Published by the Royal College of Obstetricians and Gynaecologists, 27 Sussex Place, Regent's Park, London NW1 4RG
   4 Royal Prince Alfred Hospital (RPA) Policy 'Phototherapy at home' revised August 2010

Appendix
   1 Jaundice Treatment Thresholds – ≥38 week gestation graph
   2 Jaundice babies – an information sheet for parents
   3 How to use BiliSoft

…/attachments
APPENDIX 1

Jaundice Treatment Thresholds – ≥38 week gestation

* Any risk factors? It is an option to start PT at SBR 35-50 μmol/L below the thresholds in the presence of risk factors including isoimmune haemolytic disease, G6PD deficiency, IUGR, asphyxia, significant lethargy, temperature instability, sepsis, acidosis or
APPENDIX 2

JAUNDICE BABIES
AN INFORMATION GUIDE FOR PARENTS

Most newborn babies become jaundice to some extent in the first few days after birth. This is a normal process of babies adapting to life outside the uterus (womb).¹

What is jaundice?
Jaundice is the yellowing of the skin caused by a substance called bilirubin. Bilirubin is produced when red blood cells become old & are broken down by the body. Normally it is processed in the liver & excreted by the bowels. This tends to make the baby’s stools runny/loose & greenish. The newborn baby’s liver has to ‘learn’ how to do this for itself, which may take several days.¹,²

A moderate amount of jaundice is quite common in many newborns and not harmful. However extremely high levels maybe harmful, so this is why babies’ jaundice level are monitored during the first few days to prevent the level becoming too high.¹

How is jaundice monitored?
Midwives check babies for signs of jaundice by looking at the colour of their skin and asking about the baby’s wet & dirty nappies. If they notice jaundice they may ask one of paediatric doctors to look at the baby, and possibly order a blood test to monitor the jaundice level.¹

How is jaundice treated?
- Breastfeeding assists babies to process the bilirubin & thereby reducing the jaundice. Therefore it is important that jaundiced babies breastfeed well and often/frequently. Sometimes jaundiced babies are sleepy at the breast³. If this is so, the midwives can help women to breastfeed the baby. This may included unwrapping and stimulating baby and/or expressing colostrum to give to baby.

- Depending on the level of jaundice, the baby maybe treated by special fluorescent lights called phototherapy. This may involve either the baby being placed naked under the phototherapy lights, on a BiliBed, or on a BiliSoft. The phototherapy lights help the baby breakdown the bilirubin¹,²

How long will the jaundice last?
The duration of jaundice varies greatly from one baby to another. Usually bilirubin levels (i.e. jaundice) increase over the first few days then decreases slowly over the next week or two. If the baby requires phototherapy as a treatment, it usually continues for a few days, dependant on individual babies.¹,²

If the jaundice persists after two weeks, consult your doctor.

¹ Chilton,H Baby on Board (2003):58-60
² Eisenberg,A.,Murkoff,H. Hathaway,S. What to expect the first year (2000):70
³ Bennett,V.,Brown,L.Myles Textbook for Midwives (1993):541
APPENDIX 3
How to use phototherapy mat (BiliSoft)

The BiliSoft LED Phototherapy System provides light therapy for the treatment of indirect hyperbilirubinemia, commonly known as neonatal jaundice, in a hospital or home setting.

1. Gently insert the BiliSoft fiberoptic pad into a BiliSoft Pad Cover. The illuminated side should face up and should be against the padded side of the cover.

2. Place the baby on the padded, i.e. thickest side of the BiliSoft cover. Adjust the straps as needed. IMPORTANT: Be sure the maximum area of illumination is in contact with the patient’s skin.

3. Swaddle the baby as needed. The patient, along with the light pad, may be covered or wrapped in a thin blanket. It is possible to hold and feed the patient while continuing treatment. The patient will continue to receive effective phototherapy treatment as long as the covered, light emitting section of the pad remains in direct contact with the skin.

4. Turn the BiliSoft box on

5. Insert the fiberoptic cable in the box

IMPORTANT: For hygienic purposes, never place a baby directly on the bare fiberoptic light pad. The light pad must be covered with the BiliSoft Pad Cover as described above. BiliSoft Pad Covers are for single-patient use only. The BiliSoft Pad Cover must be changed between patients and whenever it is soiled.
CAUTION:
Do not allow the fiberoptic cable or light pad to rub on sharp or abrasive surfaces. The protective coverings and optical fibers may be damaged.

CAUTION:
To prevent damage to the fiberoptic light pad, fiberoptic cable protective covering, and optical fibers, observe these guidelines. Failure to do so could decrease light intensity at the light pad:
• Do not lay or hang the fiberoptic cable where it could be crushed, this could damage the cable’s outer protective cover and the optical fibers.
• Do not bend the fiberoptic light pad or cable at a sharp angle.
• Do not place anything on the fiberoptic cable.

If the fiberoptic cable or light pad is ripped, punctured or otherwise damaged, it must be taken out of service and replaced.

CAUTION:
Do not scratch, touch or soil the fiberoptic lenses at the end of the fiberoptic cable.

WARNING:
The light box is not waterproof. Locate the unit where it will not be exposed to liquids. Liquids that enter the unit can damage it and create an electric shock hazard.

WARNING:
Never place the light box inside the infant compartment of an incubator, warmer or bassinet; these conditions expose the patient to possible injury.

1. Standby Switch – Turns the unit on/off. The green light on the switch indicates that the standby switch is turned on and the unit is powered.

2. Hour Meter – The non-resettable hour meter runs whenever the fiberoptic light pad is illuminated. Note: The hour meter is provided to track LED life and is not intended to be used to measure therapy durations.

3. Unit Overheated Indicator – When the red indicator light is on, the unit has overheated. Please seek assistance from midwife.

4. LED Module Failure Indicator - When the red indicator light flashes, at least one of the three LED pairs has failed. Please seek assistance from midwife.