Clinical Guideline

This guideline should not replace clinical judgment.

Hyperbilirubinemia for Pediatric ED

Pediatric Emergency Medicine, Neonatology, and Pediatric Nursery

Risk Factors for Developing Significant Hyperbilirubinemia

- Gestational age < 40 weeks Jaundice in 1st 24 hrs after birth
- Discharge TSB or TcB close to the Phototherapy Threshold
- Hemolysis from any cause, or rapid rate of increase of TSB or TcB:> 0.3 mg/dL per hour in the 1st 24 hrs or > 0.2 mg/dL per hour thereafter
- Phototherapy before discharge from the birth hospital -
- Parent, sibling requiring phototherapy or exchange transfusion -
- Family history, genetic ancestry suggest inherited RBC disorder including G6PD deficiency
- Exclusive breastfeeding with suboptimal intake
- Down syndrome
- Macrosomic infant of diabetic mother

Hyperbilirubinemia Neurotoxicity Risk Factors

- Isoimmune hemolytic disease
- Other hemolytic diseases, e.g., G6PD Deficiency
- Significant clinical instability in the previous 24 hours: e.g., sepsis, acidosis, asphyxia, significant lethargy, temperature instability
- Albumin < 3.0 g/dL

Infant with hyperbilirubinemia/jaundice Less than 14 DOL

Triage
- RN to place heal warmer in triage
- RN to obtain heal stick total bilirubin

→ If infant is ill appearing or in distress go off guideline and place in appropriate room

- History and physical by provider
- Gestational age/determine age in hours
- Place on triple Bili lights while waiting for results

- Calculate total serum bilirubin (TSB=BU+BC)
- Look up Exchange Normogram
- Plot on appropriate curve (according to risk factors)

TSB above Phototherapy Threshold

Yes

Are any of the following present?
- TSB within 2mg/dl or exchange threshold
- Less than 35 weeks gestation
- Ill appearing

Yes

- Start Phototherapy
- Give 20ml/kg NS bolus
- Start IV fluids at 100ml/kg/day
- Call Nicu- 1st call fellow 2nd call attending

No

- Assure adequate hydration
- Discharge home
- Follow up with PCP

No

- Start Phototherapy
- Admit to Newborn Nursery
- Encourage PO: consider NG/OG
- Consider IV if clinically dehydrated

Children's Hospital of Richmond at VCU

For questions concerning this guideline, contact:
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chrichmond.org
Last updated: January 2023
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Hyperbilirubinemia Guideline
Executive Summary

Children's Hospital of Richmond ED Hyperbilirubinemia Workgroup

Pediatric ED Owner: Judy Barto, MD, Pediatric Nursery: Tiffany Kimbrough, MD, Neonatology:

Approved (January 2023)

Chief of Pediatric Emergency Medicine:

Frank Petruzella MD, MS

Medical Director of Neonatology

Russell Moores, MD

Chief of General Pediatrics

Romesh Wijesooria, MD

CHoR Clinical Guidelines Committee:

Jonathan Silverman, MD, MPH;

Ashlie Tseng, MD

CHoR Quality Council, Executive Sponsor:

Elizabeth Peterson RN, MPH, CPHQ

Matthew Schefft, DO, MSHA

References:

Guidelines Reviewed:

Kemper, Alex R., et al. "Clinical practice guideline revision: management of hyperbilirubinemia in the newborn infant 35 or more weeks of gestation." Pediatrics 150.3 (2022).

Bhutani VK, Johnson LH, Jeffrey Maisels M, Newman TB, Phibbs C, Stark AR, Yeargin-Allsopp M. Kernicterus: epidemiological strategies for its prevention through systems-based approaches. J Perinatol. 2004 Oct;24(10):650-62. doi: 10.1038/sj.jp.7211152. PMID: 15254556.

Kuzniewicz MW, Wickremasinghe AC, Wu YW, McCulloch CE, Walsh EM, Wi S, Newman TB. Incidence, etiology, and outcomes of hazardous hyperbilirubinemia in newborns. Pediatrics. 2014 Sep;134(3):504-9. doi: 10.1542/peds.2014-0987. Epub 2014 Aug 4. PMID: 25092943.

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~~Citation~~

~~*Title:* **Spontaneous Pneumothorax**~~

~~*Authors:*~~

~~Children's Hospital of Richmond at VCU~~

~~Jason Sulkowski, MD~~

~~Judith Barto, MD~~

~~*Date:* **November 2022**~~

~~*Retrieval website:* http://www.chrichmond.org/clinical-guideline-Spontaneouspneumothorax~~

~~*Example:* Children's Hospital of Richmond at VCU. Sulkowski J, Barto J, Spontaneous Pneumothorax Guideline.~~

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***Aspiration technique:**

- Use pleural pigtail catheter kit to place <12 Fr catheter using Seldinger technique
  - 4th or 5th intercostal space, anterior axillary line
- To evacuate pneumothorax:
  - EITHER use a 60 mL syringe to aspirate air until no more air can be removed
  - OR hook the catheter to a pleuravac and wall suction until bubbling stops
- Get a Chest X-ray
- After confirmation that pneumothorax is resolved (e.g. lung <2 cm from apex of chest, symptoms improved) the pigtail can be clamped/capped
- PEM to consult pediatric surgery prior to pigtail placement (if not emergent) for input on management
- Preferably, PEM will place pigtail catheter, with assistance from pediatric surgery when available or by PEM attending request