

COMMON CLINICAL DIAGNOSES AND CONDITIONS**NEONATAL JAUNDICE****INTRODUCTION**

Jaundice due to unconjugated hyperbilirubinemia is the most common complication of the normal newborn period and occurs in nearly 50% of normal term newborns. Physiologic jaundice occurs as serum bilirubin rises from 1.5mg/dL in cord blood to 6 mg/dL by day 3 of life, followed by a subsequent decline to normal (less than 1 mg/dL) by day 10-12 of life. Physiologic jaundice is a normal process and does not cause morbidity but **must be distinguished** from pathologic jaundice. Pathologic jaundice can be due to a number of underlying etiologies and may present when there is an onset of clinical jaundice at less than 24 hours of life, the rate of rise of bilirubin is greater than 0.5mg/dL per hour, the serum bilirubin concentration is greater than 20 mg/dL, or the direct (conjugated) bilirubin level is either greater than 2mg/dL or more than 10% of the total bilirubin concentration. Failure to recognize severe hyperbilirubinemia and pathologic jaundice may result in severe morbidity, including bilirubin encephalopathy (kernicterus). Pediatric hospitalists are often asked to provide consultation regarding necessity for admission as well as render inpatient care, and must be knowledgeable about diagnosis and **treatment** of neonatal jaundice

KNOWLEDGE

Pediatric hospitalists should be able to:

- Describe the physiology of bilirubin production and metabolism including the pathophysiology that leads to jaundice.
- Compare and contrast the features that distinguish pathologic jaundice from physiologic jaundice.
- List the elements of the birth and family histories and review of systems which may aid in determining the etiology of the jaundice.
- Cite the physical examination findings which may support a potential underlying diagnosis attending to skin, abdominal, dysmorphic features and others.
- Discuss risk factors for pathologic jaundice such as prematurity and sepsis.
- Describe the differential diagnosis of direct and indirect hyperbilirubinemia attending to inborn error of metabolism, sepsis, anatomic defects, hemolytic diseases, and others.
- Compare and contrast the pathophysiology and epidemiology breast milk jaundice versus breastfeeding jaundice.
- Review the pathophysiology involved in development of kernicterus including associated factors affecting the blood-brain barrier such as acidosis and prematurity.
- Review the approach toward diagnosis including commonly performed laboratory tests.
- Describe the use of diagnostic imaging in evaluating direct hyperbilirubinemia.
- Explain the current national recommendations for the management of hyperbilirubinemia in the newborn.

SKILLS

Pediatric hospitalists should be able to:

- Recognize jaundice during a newborn physical examination.
- Accurately obtain information from the newborn and maternal histories.
- Perform a comprehensive exam, eliciting findings to support potential underlying diagnoses.
- Correctly order and interpret bilirubin results based on risk factors for developing kernicterus.
- Correctly order and interpret other studies to diagnose underlying conditions.
- Recognize indications for initiating, continuing and discontinuing phototherapy and/or exchange transfusion.
- Efficiently obtain appropriate consultative services for infants with cholestatic jaundice or possible pathologic underlying condition.
- Identify neonates requiring a higher level of care and efficiently coordinate transfer.
- Perform careful reassessments daily and as needed, note changes in clinical status and respond with appropriate actions.
- Efficiently render care by creating a discharge plan that includes an efficient and comprehensive hand-off communication with specific outpatient follow-up needs such as weight checks and repeat lab testing as appropriate.

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ATTITUDES

Pediatric hospitalists should be able to:

- Educate the family/caregiver and other professional staff regarding the risks, evaluation and therapies available for hyperbilirubinemia.
- Coordinate discharge plans with the primary care provider and home care agencies as appropriate.

SYSTEMS ORGANIZATION AND IMPROVEMENT

In order to improve efficiency and quality within their organizations, pediatric hospitalists should:

- Lead, coordinate or participate in the development and implementation of cost-effective, safe, evidence-based care pathways to standardize the evaluation and management of hospitalized neonates with jaundice.
- Lead, coordinate or participate in education programs for the family/caregiver and the community to increase awareness of evidence-based guidelines and strategies to reduce admission rates.

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