Introduction

Hyperbilirubinemia also known as neonatal jaundice is a common condition affecting approximately 60% of term and 80% of pre-term babies in the first week of life. Hyperbilirubinemia occurs due to the shorter red blood cell lifespan, higher red blood cell concentration and slower metabolism and excretion of bilirubin which leads to higher levels of unconjugated bilirubin circulating. In most of these infants the condition will resolve without any need for intervention. However, for some, there is a risk of developing severe hyperbilirubinemia which can lead to acute bilirubin encephalopathy (kernicterus). Severe hyperbilirubinemia has been on the rise in North America and Europe, with increasing frequency in term and near-term infants. The goal of early identification and intervention is to decrease potential morbidity and mortality associated with bilirubin encephalopathy and to minimize disruption to exclusive breastfeeding and parent-child bonding in the neonatal period.

This approach for early detection and intervention for hyperbilirubinemia in the newborn is recommended by the Clinical Expert Advisory group for the Ministry of Health and Long-Term Care Quality-Based Procedure on Hyperbilirubinemia in Term and Late Pre-Term Infants, as well consensus from the guideline group.

Purpose:

1. improve early identification of infants at risk for severe hyperbilirubinemia and to decrease potential associated morbidity and mortality;
2. enhance the quality of care delivered by streamlining treatment management;
3. promote exclusive breastfeeding; and
4. enhance appropriate utilization of community resources and ensure appropriate follow up.

Target Patient Population

- previously healthy infants
- age <14 days
- born at or ≥ 35 weeks gestational age

Exclusion Criteria:

- With conjugated hyperbilirubinemia defined as > 18 μmol/L or greater than 20% of the TSB concentration;
- Meeting NICU direct admission criteria for exchange transfusion or IVIG administration;
- With suspected acute bilirubin encephalopathy or displaying clinical findings associated with acute bilirubin encephalopathy such as hypotonia, weak suck or high pitched cry; and
Inpatient Management of Hyperbilirubinemia management pathway

1. Complete history, initial exam, and obtaining diagnosis leading to phototherapy
2. Phototherapy should not be interrupted for feeding or other care
3. Infants <24 hours old, previous healthy, and born ≥ 35 weeks gestational age admitted to Pediatric Medicine... (see graph)
4. Consider repeating TSB in 6-24 hours

Clinical features:
- Direct hyperbilirubinemia with unconjugated bilirubin
- Jaundice present within first 24 hours of life
- Jaundice more severe and persistent
- Dehydration
- Anemia
- Cephalohematoma or significant bruising
- Previous sibling received phototherapy

Laboratory and diagnostic in infants
- Clinical and laboratory abnormalities, and/or phototherapy
- Jaundice in first 24 hours of life
- Severe phototherapy
- Jaundice in first 24 hours of life
- Severe phototherapy

Management Pathway

Implementation Plan

• Inpatient Medical Director to communicate updates in practice to the Division of Paediatric Medicine;
• Resident chiefs to communicate updates in practice to the resident group; and
• Education and awareness building by the guideline group during resident/fellow orientation, resident educational rounds, and nursing orientation/staff meetings/situational bedside teaching

Evaluation Plan

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• Monitor average length of stay
• Monitor # of infants admitted with hyperbilirubinemia who had rebound bilirubin level checked prior to discharge

Guideline Group

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References

3. Fetus and Newborn Committee, Canadian Paediatric Society. Guidelines for detection, management and prevention of hyperbilirubinemia in term and late preterm newborn infants (35 or more week’s gestation). Paediatric Child Health 2018; 12(Suppl B):1B-12B

Attachments:

care pathway march 27.pdf
COMMUNITY HOSPITAL CONTACTS.pdf
hyperbilirubinemia intensive phototherapy.pdf
hyperbilirubinemia newborn fig3.pdf
Isolette Tip Sheet.docx
Providing Effective Phototherapy_May 26 2020.pdf