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## Hyperbilirubinemia Or Pathological Jaundice In Newborn

Hyperbilirubinemia, the accumulation of unconjugated bilirubin in the blood, is one of the most common and overlooked conditions occurring in nearly 60% of all preterm and term neonates. (Watson, 2009). Pathological jaundice, which is the most threatening type of hyperbilirubinemia, occurs after maternal isoimmunization resulting in the abnormal destruction of red blood cells in the fetus or neonate. (Hendrickson & Delaney, 2016). Hyperbilirubinemia and hemolytic disease of the newborn is often overlooked as a serious medical condition in the clinical setting but has serious complications such as fetal hypoxia, kernicterus and fetal death. (Watson, 2009). Although many medical advances have been made to prevent maternal isoimmunization and treat hyperbilirubinemia and hemolytic disease of the newborn, more research needs to be conducted to improve infant-parent interaction during treatment and competency about this topic in the clinical setting among nurses.

Majority of neonates with hyperbilirubinemia will require phototherapy as a part of their treatment plan to promote clearance of bilirubin from the neonate's body through feces and urine. Phototherapy treatment is a successful treatment of jaundice but often requires NICU admission and close monitoring of the infant under iridescent lighting. Phototherapy can decrease parent-child interaction because the infant must stay in a bassinet under the lighting. A study conducted at three NICU's in Norway showed that fiberoptic blankets, an alternative form of traditional phototherapy, is more comfortable for the infant, promotes infant-child bonding by allowing kangaroo care and is as effective at treating jaundice (Foreland, Rosenberg & Johannessen, 2016).

To improve patient outcomes among neonates with hyperbilirubinemia and decrease the risk of complications developing, it is recommended that neonates stay in a supine position if conventional overhead therapy is being used. In a study conducted comparing the effectiveness of phototherapy when the infant is supine versus when they are turned periodically, there were no statistically significant data suggesting that turning the infant often improves the infant's treatment. This reduces nurses' workload allowing them to focus on important neonatal assessments and monitor the neonate more closely for effectiveness of treatment, thus improving the clinical competency of nurses in relation to preventing serious complications that may develop from the condition (Lee Wan Fei & Abdullah, 2015).

The findings above are promising in preventing the life-threatening complications of hyperbilirubinemia and hemolytic disease of the newborn and improving parent-child interactions in infants with this condition. The complications that can occur from severe jaundice such as irreversible kernicterus and neonatal death are completely preventable and it is much of the nurses' responsibility to ensure that those events do not occur (Wells, Ahmed & Musser, 2013). Transcutaneous bilirubinometer is a non-invasive method for nurses to screen at risk neonates for hyperbilirubinemia. Research shows that is over 90% effective as serum bilirubin measurements and improves neonatal comfort and allows for faster results (Jnah, Newberry & Eisenbeisz). Nurses should be advocates and provide education about breastfeeding and promoting kangaroo care, educating parents about isoimmunization and the signs and symptoms of jaundice, and performing the proper screenings to detect hyperbilirubinemia in the newborn (Wells, Ahmed & Musser, 2013).

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