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Review of literature on neonatal jaundice

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Abstract

Jaundice is the most common condition in newborn especially in the first week life. It is characterized by yellowish discoloration of the skin and mucous membrane due to elevated bilirubin levels in the blood. When Serum bilirubin levels may rise excessively, which can be lead to Kernicterus, hearing loss, developmental delays, Neurological problem in neonates? It is common in newborn there is an excessive breakdown red blood cells leading to an increase in bilirubin levels. A newborn baby liver is not fully developed so inadequate removing the bilirubin from the blood. A newborn baby is about 2 weeks old, it produced adequate processing of bilirubin. Jaundice developed shortly after birth within 24 hours in newborn.

Keywords: Discoloration, mucous membrane, Kernicterus, developmental delay, Neurological pro

Introduction

Neonatal jaundice characterized by yellowish skin, sclera, and mucous membranes or the yellowish appearance is a sign of an increased blood pigment called Bilirubin. It occurs normally 2/3 of all healthy newborns. It shows the sign of a problem with the baby's feeding, level of hydration or red blood cells lifespan problems in newborn. Other rare causes are metabolism disorders, gland malfunction and liver disease can also present with jaundice. Neonatal jaundice can have occurred clinical with etiology of neonatal hyperbilirubinemia which classified two types which are unconjugated hyperbilirubinemia and conjugated hyperbilirubinemia. Unconjugated hyperbilirubinemia which is diagnosed by assessing bilirubin level by blood samples for total serum bilirubin. Conjugated hyperbilirubinemia which is typically diagnosed through laboratory studies, by serum aminotransferase, prothrombin time, urine cultures, tests for inborn errors of metabolism for treatment. Phototherapy and exchange transfusions are the treatment of unconjugated hyperbilirubinemia. Treatment of conjugated hyperbilirubinemia is more complex to treat because It depends on the etiology of the jaundice.

Prevalence

Global jaundice incidence be around 60-80 million cases per year. Jaundice is estimated top 5-10 causes o highest number of neonatal deaths in countries deaths. It is estimated 7.6 million deaths estimated to occur in children below the age of 5 years in 2010, 40% occurred during the neonatal period. Given Millennium Development Goal four to reduce under-five child mortality by two-thirds by 2015 the attention needs to be focused on the neonatal period and associated morbidity and mortality also.

Definition

Neonatal jaundice is defined as yellow discoloration of the skin and sclera of newborn infants that results from hyperbilirubinemia.

Types of jaundice

1. **Physiological Jaundice:** Immature liver functioning in newborn effects to conjugate and excrete bilirubin. Physiological jaundice is a common and normal condition in newborn babies which occurs in about 3 in 5 newborns. As the liver mature, is ability to conjugate bilirubin properly.
2. **Breast milk jaundice:** Breastfeeding jaundice also known as breast milk jaundice occurs a few days after birth. It is caused by substances in breast milk which interferes

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in newborn to conjugate the bilirubin. Babies can be dehydrated because of problems with breastfeeding.

3. **Pathological Jaundice:** Pathological jaundice occurred due to increase conjugate bilirubin abnormally within 24 hours.
4. **Hemolytic Jaundice:** Hemolytic jaundice occurs due to increase due to Rh hemolytic disease ABO incompatibility, (c) Glucose-6-phosphate dehydrogenate (G-6-PD) deficiency and minor blood group incompatibility.

Cause

- Sepsis (Blood infection)
- Different blood type
- Bruising shows from difficult birth
- More red blood cells
- Hypoxia
- Liver problem like as biliary atresia

Sign and symptoms

- Fever over 100°F (38 °C)
- Yellow coloring of eye
- Baby feeds poorly, Baby looks lethargic
- Baby high-pitched cries

Diagnose

Diagnose of infant jaundice on the basis of baby's appearance. Check the level of bilirubin will determine the course of treatment. Tests to detect jaundice and measure bilirubin include which are:-

1. A Physical exam of baby
2. A laboratory test of a sample of baby's blood
3. A skin test with a devices called TcB Transcutaneous bilirubinometry: non-invasive screening technique used to determine the need for formal serum bilirubin (SBR) testing.

Management

1. **Enhanced nutrition of baby:** To prevent baby from weight loss especially a first few days after birth. Frequent breastfeeding ensure that baby receives adequate nutrition which help to gain weight. Formula –fed babies: - Give baby one to two ounces of formula two to three hours during this first week of life.
2. **Light therapy (phototherapy):** Placed under a special lamp that emits light in the blue-green spectrum to baby. The light changes the shape and structure of bilirubin molecules in such a way that they can be excreted in both the urine and stool of baby. During treatment, baby will wear only a diaper and protective eye patches within the use of a light-emitting pad or mattress.
3. **Intravenous immunoglobulin (IVIg):** Jaundice is a condition which related to blood type differences between mother and baby. The baby carrying antibodies from the mother that contributes to the rapid breakdown of the baby's red blood cells. Intravenous transfusion of an immunoglobulin a blood protein that can reduce levels of antibodies help to decrease jaundice in baby.

Conflict of Interest

Not available

Financial Support

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