



NURSING CARE OF NEONATAL JAUNDICE IN HYPERBILIRUBINEMIA BABIES: A CASE REPORT

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Research Report

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ABSTRACT

Introduction: Jaundice is a condition that is often found in the 24 hours after the birth of the baby due to hyperbilirubinemia. Hyperbilirubinemia can cause various complications and death if not treated properly and immediately. The knowledge and ability of nurses in providing nursing care for neonatal jaundice still needs to be improved. This study aims to describe nursing care for neonatal jaundice in hyperbilirubinemia infants. **Methods:** This study uses a case study approach design through the nursing process with a sample of a hyperbilirubinemia baby with neonatal jaundice nursing problems. Data collection techniques were carried out through interviews, observations, physical examinations and documentation studies. Data analysis in this study uses narrative analysis. **Results:** The case report found jaundice on the skin, sclera, and mucosa. The nursing diagnosis in this study was neonatal jaundice associated with less than 7 days of age. The intervention provided in the form of phototherapy and breastfeeding education showed the result was not found jaundice on the skin, sclera, and mucosa after three days. **Conclusion:** The provision of phototherapy and breastfeeding education is effective in solving the neonatal jaundice.

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INTRODUCTION

Gross motor and fine motor skills
Hyperbilirubinemia is an excess of bilirubin levels in the blood of more than 10 mg% in the first week which results in jaundice, a yellow color that is clearly visible in the skin, mucosa, sclera and urine, and other organs, whereas in normal infants the total serum bilirubin level is 5 mg% (Sembiring, 2019). Bilirubin levels will increase after birth, then settle and then decrease after the age of 7 days (Rohsiswatmo & Amandito, 2018). Pathologically the baby will experience jaundice throughout the body or grades three to five with bilirubin levels (> 12 mg/dl) this condition is indicated for phototherapy, if bilirubin levels are > 20 mg/dl then the baby is indicated for exchange transfusion. (Manggiasih & Jaya, 2016).

Neonatal jaundice is included in the top 5 causes of death for infants aged 0-6 years in Indonesia. There are as many as 6.6% of infants died in Indonesia due to neonatal jaundice (Kemenkes RI, 2015). As many as 3%-5% of neonates who have pathological

hyperbilirubinemia are at high risk of developing kernicterus (Rohsiswatmo & Amandito, 2018). The incidence of jaundice in term infants in some hospitals is quite high, ranging from 13.7% to 85%. Based on neonatology registration data at the Sanglah Central General Hospital, Denpasar Bali, from 1093 cases of neonates treated there were 165 (15.09%) cases with neonatal jaundice (Dewi et al., 2016). According to Puspita (2018), the incidence of neonatal jaundice was 29.46% and 17.80% of infants had neonatal jaundice from 21.71% of infants with low birth weight.

Hyperbilirubinemia can cause cerebral palsy and sensorineural deafness (Wu et al., 2018). If the baby survives, there will be residual effects from the kernicterus, namely the baby can become deaf, muscle spasms, mental disorders, speech disorders, and disorders of other neurological systems. (Manggiasih & Jaya, 2016).

Hyperbilirubinemia can cause many complications and even death in infants if not

treated immediately. The knowledge and ability of nurses in providing nursing care to infants with neonatal Jaundice will greatly play a role in the success of the baby's recovery. Therefore, the researcher conducted a case report of Neonatal Jaundice Nursing Care for Hyperbilirubinemia Infants. This study aims to describe nursing care for neonatal jaundice in hyperbilirubinemia infants

MATERIALS AND METHODS

This research used a case report design through the nursing process. The sample in this study was one the hyperbilirubinemia baby with neonatal jaundice nursing problems at Dr. Soegiri general Hospital in September 2019. Inclusion criteria in this study were infants with neonatal jaundice who were admitted to the NICU. The patient was treated and observed for a minimum of three days. Data collection techniques were carried out through interviews, observations, physical examinations and documentation studies. Data analysis in this study was narrative analysis.

RESULT

Mrs. F's baby is female and 9 days old being treated in the NICU of Dr. Soegiri general Hospital with a medical diagnosis of hyperbilirubinemia. The baby was born at 39 weeks gestation. Babies born by cesarean section (SC) with indications of oligohydramnios and former cesarean section (BSC) 2.5 years.

At birth the baby immediately cried with a birth weight of 3000 grams, height 50 cm, head circumference 34 cm. The baby was brought to the NICU 15 minutes after birth with good skin turgor, yellow sclera, no edema, no irritation to the umbilical cord, with a body temperature of 36.0°C, respiratory rate 40x/minute, pulse rate 130x/minute. The baby's Apgar score is 5-6.

On the third day after birth, the baby looked yellow on the body, especially on the face, sclera, mucosa, neck and chest with Kramer grade 2 (face, neck and chest). Physical examination of the baby found a temperature of 36.3°C, pulse rate 126 x/minute with slightly weak pulse strength, respiratory rate 49 x/minute, and SpO₂ 95%, regular breathing rhythm with pale mouth color, dry lips, yellow mucous membranes, weak suction reflex. The results of laboratory tests on the third day after birth showed direct bilirubin 0.51 (N < 0.25 mg%) and total bilirubin 16.21 (N 0.36-0.97 mg/dl).

The therapy received by the patient consisted of Citizine injection 0.3 mg/24

hours/IV, Urodex injection 30 mg/8 hours/IV, and 2x24 hour phototherapy.

Nursing diagnoses based on Indonesian nursing diagnosis standards are neonatal jaundice (D.0024) associated with the age of less than 7 days characterized by an abnormal blood profile (direct bilirubin 0.51 and total bilirubin 16.21), yellow mucous membranes, yellow skin and sclera (SDKI, 2017).

Nursing interventions in cases focused on neonatal phototherapy (I.03091), which included monitoring of jaundice in the sclera and skin, identification of fluid requirements according to gestational age and weight, monitoring of temperature and vital signs every 4 hours, monitoring of side effects of phototherapy (eg, hyperthermia, diarrhea, rash on the skin, weight loss of more than 8-10%), providing phototherapy, breastfeeding education, and collaboration of direct and indirect bilirubin venous blood examination (SIKI, 2017).

Nursing implementation was carried out according to the planned intervention. Formative evaluation was carried out at each intervention, and summative evaluation was carried out at the end of each shift. The results of providing nursing interventions for 72 hours showed no jaundice was found on the skin and sclera, moist mucous membranes.

DISCUSSION

Breastmilk is the only food accept and The most common condition in infants with hyperbilirubinemia is jaundice. Jaundice is caused by the presence of bilirubin in the body or accumulation of bilirubin in the blood of more than 5 mg/ml in 24 hours, which indicates a functional disorder of the lip, biliary system, or hematological system (Manggiasih & Jaya, 2016). According to Hosea et al.'s research (2015), about hyperbilirubinemia in Dr. Sutomo general hospital Surabaya yellow on the mucosa, sclera, nails, and skin, also characterized by decreased suction reflex is a sign of hyperbilirubinemia. Based on the researcher's analysis, Mrs. F's baby decreased in the suction reflex. Manggiasih & Jaya (2016) said high blood bilirubin levels cause babies to be lazier in their activities and their suction reflexes decrease. This is in accordance with the case where the patient showed icteric symptoms on the skin, sclera, mucosa and a decrease in the suction reflex.

Hyperbilirubinemia is evidenced by bilirubin levels that show abnormalities on the third day after birth. According to Ihsan (2017), Examination of serum bilirubin in term infants reaches a peak of approximately 6 mg/dl,

between 2 and 4 days of life. If the value is above 10 mg/dl which means it is not physiological.

Signs and symptoms found in the assessment are in accordance with the diagnosis of neonatal jaundice. Neonatal jaundice is a condition of yellowing of the skin and mucous membranes of neonates after 24 hours of birth due to unconjugated bilirubin entering the circulation (SDKI, 2017).

Neonatal phototherapy is one of the interventions that can be given in cases of jaundice. Neonatal phototherapy is done by giving fluorescent light therapy aimed at the neonate's skin to reduce bilirubin levels in neonates who have indirect hyperbilirubinemia (Azlin, 2011; SIKI, 2017). Indrayani & Riani's study (2019), showed that there was a significant relationship between phototherapy and decreased total bilirubin levels in newborns with hyperbilirubinemia. Phototherapy within 24 hours can reduce bilirubin levels by 2.5 ± 0.8 mg/dl (Dewi et al., 2016).

Another intervention provided is breastfeeding education. Breast milk is very useful in reducing bilirubin levels. The average decrease in bilirubin levels of babies who are breastfed every 2 hours is 7,17 mg/dl. In infants who are breastfed every 3 hours, the average decrease in infant bilirubin levels is 7,01 mg/dl (Indanah et al., 2019).

After giving the intervention, it was found that all problems could be resolved on the third day of treatment which was indicated by no icterus on the skin and sclera, moist mucous membranes.

CONCLUSION

Symptoms of jaundice on the skin, sclera and mucosa encountered in Mrs.F's baby raise the nursing diagnosis of neonatal jaundice. The intervention of providing phototherapy and breastfeeding education was successful in solving nursing problems on the third day of treatment

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