CHAPTER
101

Neonatal jaundice and breastfeeding

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ABSTRACT
Neonatal jaundice is defined by a yellowish discoloration of the skin, conjunctiva, and sclera due to elevated serum or plasma bilirubin in the neonatal period. In most newborns it is an ephemeral, low-severity event. This event can be triggered, for example, by ABO and Rh factor incompatibility, glucose-6-phosphate dehydrogenase (G6PD) deficiency, and immaturity of liver metabolism processes. However, breastfeeding-associated neonatal jaundice stems from two different mechanisms: the direct effect of mature human milk inducing increased intestinal reabsorption of bilirubin and jaundice resulting from inadequate intake of human milk.

Keywords: Neonatal jaundice, Breastfeeding, Bilirubin.

1 INTRODUCTION

Neonatal jaundice is defined by a yellowish discoloration of the skin, conjunctiva, and sclera due to elevated serum or plasma bilirubin in the neonatal period. In most newborns it is an ephemeral, low-severity event. This event can be triggered, for example, by ABO and Rh factor incompatibility, glucose-6-phosphate dehydrogenase (G6PD) deficiency, and immaturity of liver metabolism processes. However, breastfeeding-associated neonatal jaundice stems from two different mechanisms: the direct effect of mature human milk inducing increased intestinal reabsorption of bilirubin and jaundice resulting from inadequate intake of human milk.

2 OBJECTIVE

This research aims to discuss the relationship between neonatal jaundice and its causes by breastfeeding, as well as its repercussion on the health of newborns.

3 METHODOLOGY

This is a literature review of the narrative type, of online searches, addressing articles searched in the PubMed and VHL databases until September 2021, selecting materials from the last 11 years and the descriptors "Neonatal", "Jaundice" and "Breastfeeding".

4 RESULTS AND DISCUSSION

It is observed as some factors in the physiological process of neonatal jaundice caused by breastfeeding, the increase in serum unconjugated bilirubin concentration and longer duration of hyperbilirubinemia in infants, by the presence of an unusual metabolite of progesterone, pregnane-3 (alpha), 20 (beta)-idol, which inhibits the bilirubin-conjugating enzyme, also by the high concentration of epidermal growth factor in infants and in breast milk, which influence an increased absorption in the neonate's intestine. Moreover, the newborn having an insufficient intake of breast milk, either by an inadequate latch, low volume of breastfeeding or frequency of breastfeeding less than eight times in 24 hours, leads to a decrease in the formation and excretion of feces, thus increasing the reabsorption of bilirubin into the plasma, which results in unconjugated hyperbilirubinemia, consequently, generates a picture of lethargy, malnutrition and even kernicterus. The absence of early exclusive breastfeeding is associated with delayed brain growth and cognitive disturbances, which indirectly raises vulnerability to unconjugated /bilirubin toxicity.

5 CONCLUSION

It is therefore inferred from the selected articles that breastfeeding jaundice is a physiologic process caused both by mature human milk and by inadequate breastfeeding techniques, which if done correctly avoid hyperbilirubinemia (excess indirect bilirubin) and its progression to neurologic retardation, lethargy, malnutrition, and kernicterus.

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