عنوان مقاله:

Clinical Significance of OATP۲ Gene Variants in Iranian Neonates with Hyperbilirubinemia

محل انتشار:

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خلاصه مقاله:

Background: Neonatal hyperbilirubinemia is a life-threatening and multifactorial disorder affecting about ۶۰%-۸۰% of newborns during their first week of life. Various environmental and genetic factors can contribute to the occurrence of this problem. The present study aimed to investigate the relationship between the two organic anion transporter ۲ (OATP۲) gene polymorphisms (۳۸۸A>G and ۵۲۱T>C) and the risk of neonatal hyperbilirubinemia.Methods: A total of ۲۰۰ neonates, including ۱۰۰ infants with pathological icterus without a specific cause as the case group and ۱۰۰ healthy neonates as the control group, were included in this cross-sectional study. Using fresh blood DNA, allelic frequency and genotypic distribution of each variant were determined by polymerase chain reaction-restriction fragment length polymorphism method. The biochemical measurements were also performed for both groups.Results: The two groups were similar in terms of gender, birth weight, gestational age, diet, and type of feeding. Allelic frequency and genotype distribution of the ۳۸۸A>G and ۵۲۱T>C polymorphisms did not show any significant association with hyperbilirubinemia both in crude and modified conditions (P>۰.۰۵). Moreover, no significant difference was observed between cases and controls in diplotypes and haplotypes analysis (P>۰.۰۵).Conclusion: As evidenced by the obtained results, the neonates with hyperbilirubinemia were not different from healthy newborns in allelic frequency and genotypic distribution of the two variants of the OATP۲ gene. It seems that these two polymorphisms are not correlated with the risk of hyperbilirubinemia in an Iranian neonatal population. Further studies with larger sample sizes are needed to confirm the results of this study.

کلمات کلیدی:
Neonatal hyperbilirubinemia, OATP۲ gene, Polymorphism, ۳۸۸A>G, ۵۲۱T>C