A comparative study on efficacy of ursodeoxycholic plus phototherapy with single phototherapy in the treatment of indirect hyperbilirubinemia of neonates

Abstract

Introduction: Hyperbilirubinemia that is associated with the risk of kernicterus is the most common cause of hospitalization of premature and term newborns. The aim of this study is to investigate the efficacy of ursodeoxycholic plus phototherapy versus single phototherapy in the treatment of indirect hyperbilirubinemia of neonates.

Materials and Methods: This study is a clinical trail that conducted on neonates with indirect hyperbilirubinemia whom were hospitalized at BuAli education and treatment centers of Ardebil. 100 newborns were enrolled in the study and were randomly divided into two groups. The treatment group (n=50) received 10 mg/kg/day divided q12h ursodeoxycholic acid in addition to phototherapy, while the control group (n=50) only received phototherapy. Total bilirubin levels were measured every 12 hours until reaching below 10mg/dL. Also, duration of phototherapy and hospitalization in both groups were recorded. Data were analyzed in SPSS21 environment using t-test for independent samples and ANOVA with repeated measures.

Result: There was no difference between the treatment and control groups in terms of mean total bilirubin on admission (P=0.057), and 12 hours (P=0.930), 24 hours (P=0.621), 36 hours (P=0.706), and 48 hours (P=0.057) after admission.

Conclusion: Our study revealed that use of ursodeoxycholic acid in addition to phototherapy in treating indirect hyperbilirubinemia of newborns had no preference to just phototherapy treatment.

Keywords: Phototherapy; Indirect Hyperbilirubinemia; Ursodeoxycholic Acid, Neonate.