

## Original Article



# Effect of Synbiotic on the Treatment of Jaundice in Full Term Neonates: A Randomized Clinical Trial

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## ABSTRACT

**Purpose:** Jaundice accounts for most hospital admissions in the neonatal period. Nowadays, in addition to phototherapy, other auxiliary methods are used to reduce jaundice and the length of hospitalization. This study aimed to investigate the effect of probiotics on the treatment of hyper-bilirubinemia in full-term neonates.

**Methods:** In this randomized clinical trial, 83 full-term neonates, who were admitted to the hospital to receive phototherapy in the first 6 months of 2015, were randomly divided into two groups: synbiotic (SG, n=40) and control (CG, n=43). Both groups received phototherapy but the SG also received 5 drops/day of synbiotics. Serum bilirubin, urine, stool, feeding frequency, and weight were measured daily until hospital discharge. A *p*-value<0.05 was considered statistically significant.

**Results:** The mean total serum bilirubin in the SG was lower than that in the CG (9.38±2.37 and 11.17±2.60 mg/dL, respectively). The urine and stool frequency in the SG was significantly higher than that in the CG (*p*<0.05). The duration of hospitalization in the SG was shorter than that in the CG.

**Conclusion:** Use of synbiotics as an adjuvant therapy had a significant treatment effect on jaundice in full-term neonates. Further studies including larger samples with long follow-up periods are essential to confirm the benefits of routine use of synbiotics in neonatal patients with jaundice.

**Keywords:** Hyper-bilirubinemia; Probiotics; Synbiotics; Phototherapy; Jaundice; Neonate infant

## INTRODUCTION

Jaundice is the most common medical condition occurring within a few days after birth in newborns. Physiologic jaundice during the first week of life is seen in approximately 60–80% of neonates [1-3]. Two factors may lead to high levels of unconjugated bilirubin, including sterile intestines of neonates at birth, in which conjugated bilirubin cannot be converted











