Comparison of total serum magnesium and zinc level in icteric neonatal before and after phototherapy

Abstract

Background: Neonatal jaundice is a common problem in the neonates which is caused by increased unconjugated bilirubin and can result in serious neurological side effects such as kernicterus.

Aim: The aim of this study was to compare total serum magnesium and zinc level in icteric neonatal before and after phototherapy.

Materials and Methods: A prospective semi-experimental study was performed in Boali hospital in Ardabil during 2019. 103 icteric exclusively breast fed newborns with non-hemolytic jaundice were enrolled in the study.

Total serum zinc and magnesium level was measured before and after termination of phototherapy.

Results: From 103 patients with icterus, 54.4% were male and 45.6% were female neonates. Their mean gestational age was 38.17±1.39 weeks and the mean birth weight was 3.15±0.46 Kg. There was a significant difference between serum magnesium levels before (2.36mg/dl) and after phototherapy (2.18 mg/dl). Also a significant difference was seen between serum zinc levels before (105.63 mg/dl) and after phototherapy (94.56 mg/dl).

Conclusion: with phototherapy decreases the total magnesium and zinc concentration.

Keywords: Hyperbillirubinemia, magnesium, zinc, phototherapy.