

EFFICACY OF CLOFIBRATE ON SEVERE NEONATAL JAUNDICE ASSOCIATED WITH GLUCOSE-6-PHOSPHATE DEHYDROGENASE DEFICIENCY (A RANDOMIZED CLINICAL TRIAL)

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Abstract. Glucose-6-phosphate dehydrogenase (G6PD) deficiency may cause severe hyperbilirubinemia with bilirubin encephalopathy unless intervention is initiated. The aim of this study was to assess the efficacy of clofibrate in full term G6PD deficient neonates with jaundice. A randomized clinical trial study was performed in two groups of full term G6PD deficient jaundiced neonates (clofibrate treated group, $n=21$; control group, $n=19$). Infants in the clofibrate group received a single oral dose of 100 mg/kg clofibrate, whereas control group received nothing. Both groups were treated with phototherapy. Serum total and direct bilirubin levels were measured at the onset of treatments, 16, 24 and 48 hours later. On enrollment, the mean total serum bilirubin (TSB) level in the clofibrate treated group was 18.40 ± 2.41 and in the control group was 17.49 ± 1.03 ($p=0.401$). At 16, 24 and 48 hours of treatment, the mean TSB in the clofibrate group were 15.2 ± 1.9 , 12.6 ± 2.4 , and 10.1 ± 2.4 and in the control group were 16.5 ± 1.2 , 13.3 ± 2.2 and 11.4 ± 2.4 , respectively ($p=0.047$). At 48 hours, 7 (33%) cases in the clofibrate group and one (5%) case in the control group were discharged with a TSB <10 mg/dl ($p=0.031$). No side effects were observed on serial examinations during hospitalization, or on the 1st and 7th days after discharge. The results show that clofibrate induces a faster decline in serum total bilirubin level, a shorter duration of phototherapy, and hospitalization with no side effects in full term G6PD deficient neonates with jaundice.

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