

Original Paper

Prevalence of Glucose - 6 - phosphate dehydrogenase deficiency in neonates born in Tehran-Iran (2008-09)

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Abstract

Background and Objective: Regarding to probable high frequency of Glucose - 6 - phosphate dehydrogenase (G6PD) deficiency in Iran, screening of all neonates by cord blood is under consideration. This study was conducted to determine the prevalence of G6PD deficiency in newborns and the relation between gender, jaundice, hemolysis, anemia and the G6PD deficiency in neonates born in Tehran, Iran.

Materials and Methods: In this descriptive study, cord blood of 450 neonates born in Akbarabady hospital in Tehran, Iran during 2008-09 were screened. Demographic information was recorded by questionnaires and the newborns were examined for detection of jaundice till discharge. G6PD level was determined by Fluorescent Spot Test (FST). G6PD deficient neonates were put under close observation for detection of jaundice. Enzyme activity was rechecked by spectrophotometry.

Results: Nine neonates out of 450 were G6PD deficient (8 boys and one girl). Prevalence of G6PD deficiency was 2% (3.3% for boys and 0.5% for girls). Six neonates of nine G6PD deficient neonates (66%) developed pathologic jaundice. Four neonates were managed by phototherapy and two by exchange transfusion.

Conclusion: This study showed that G6PD deficiency is more prevalent among male neonates, therefore, G6PD determination is recommended to prevent the possible neonatal jaundice.

Keywords: G6PD deficiency, Fluorescent spot test, Neonatal jaundice, Gender

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