Prevalence of G6PD deficiency in neonates referred to Semnan University of Medical Science´s screening Lab

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Abstract

Background and objectives: Glucose-6-phosphate dehydrogenase (G6PD) is an enzyme in the pentose phosphate pathway. G6PD deficiency (an X-linked recessive hereditary disease) is an inherited condition affecting approximately 3% of the people globally. This deficiency can cause hemolytic anemia and jaundice in neonates. The goal of this study is to detect the prevalence of G6PD deficiency in neonates referred to Semnan province screening lab

Material and Methods: This cross sectional study, from 2007 to 2010, was conducted on the basis of country planned program and in line with neonatal screening tests. Blood samples were taken from the heels of 3-5 day neonates. Assessment of G6PD was done by rapid fluorescent spot test. The Prevalence of G6PD deficiency in boys and girls was compared by chi square ($p<0.05$)test.

Results: Of 9353 newborns referred to semnan province screening Lab., 4820(51.53%) are males and 4533(48.47%) females. Three hundred (3.2%) of them suffer from G6PD deficiency. Of these, 263 (5.45%) are males and 37 (0.81%) females. The ratio of male to female is 7 to 1.

Conclusion: The prevalence of G6PD deficiency is detected 3.2% in Semnan province and its frequency in boys is more than that of girls, which is expected.

Key words: Glucose -6-phosphate dehydrogenase, Neonatal screening, Fauvism