Frequency of G6PD Deficiency among Bahraini students: A Ten Years Study

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Background: G6PD deficiency is a genetic disease, common in Bahrain, and has high frequency world wide. The majority of affected individuals are asymptomatic. The disease can cause hemolytic anemia, which could be drug-induced or following infection, neonatal jaundice, chronic non-spherocytic hemolytic anemia and favism. The aim of the study is to report on the frequency of G6PD among the students in Bahrain, during 1999-2008.

Setting: Hematology Laboratory at Salmaniya Medical Complex.

Design: A cross sectional interval study, performed annually for a period of ten years.

Method: All the students of the 11th grade (2nd grade in secondary schools) were screened annually, this program continued for ten years 1999-2008. Samples were collected from the school children and tested for G6PD level. Blood samples were analyzed in the hematology laboratory at SMC. Students were issued cards showing their status and their results were recorded in the computer for data analysis. Informed consent was taken from the parents.

Result: 60,424 students were screened from 1999-2008. The ratio between males and females was 2:3. The mean prevalence of G6PD was 22.3% for homozygous. High prevalence rate was seen in Sitra 197/433 (45%), and Western area 90/250 (36%). No significant difference was observed during this period.

Conclusion: The mean prevalence rate of G6PD Deficiency among Bahraini students was 22.3%, for homozygous, which is comparable with the prevalence in other Gulf countries. No significant change in the prevalence rate during the 10 years was observed. More studies are needed to explore the clinical effect of this condition.

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