Extended Abstract Journal of Molecular Microbiology 2021
Vol.5 No.4

Glucose-6-Phosphate Dehydrogenase Deficiency among neonates with hyperbilirubinemia in a tertiary care hospital in the north eastern region of India

Ngangom Arunkumar Singh
Regional Institute of Medical Sciences, India

Introduction:
Glucose-6-Phosphate Dehydrogenase (G6PD) deficiency can lead to haemolysis due to impairment in the production of reduced glutathione. G6PD deficiency is the commonest enzyme deficiency in human affecting about 400 million people worldwide. In the neonates G6PD deficiency can lead to hyperbilirubinemia which can ultimately progress to the more serious condition of kernicterus if not diagnosed and treated in time. High prevalence of G6PD deficiency with an overall prevalence of 7.7% is reported among the tribal population of India which are also malaria endemic area. The study was designed to estimate prevalence of G6PD deficiency among neonates with hyperbilirubinemia in a tertiary care hospital in the north eastern region of India which is predominantly a tribal populated area with high malarial endemicity

Material and Methods:
A prospective study was designed at Regional Institute of Medical Sciences Hospital, Imphal among 150 newborn with neonatal hyperbilirubinemia who were screened for any G6PD deficiency and other causes. Participants were enrolled from Nov. 2012 to October 2014. The neonates were followed up to see if they required any phototherapy and exchange transfusion.

Results:
Among the 150 neonates with hyperbilirubinemia, 18(12%) were G6PD deficient and out of the 18 G6PD deficient neonates 9 (50%) required phototherapy while 3 (16.6%) required exchange transfusion. It was also observed that G6PD deficiency was the commonest cause of pathological neonatal hyperbilirubinemia when compared to other causes

Conclusion:
There is a high prevalence of G6PD deficiency among neonates with hyperbilirubinemia and screening for G6PD deficiency among such new born can prevent further complication. The screening for G6PD deficiency seems more relevant for a region like North Eastern India which is a malaria endemic area.