

Bilirubin Course among Newborns with Glucose-6-Phosphate Dehydrogenase Enzyme Reduced Activity

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Objective: To evaluate the course of jaundice in newborns with G6PD reduced activity compared to G6PD normal activity.

Design: A Prospective Study.

Setting: Salmaniya Medical Complex and Jidhafs Maternity Hospital, Bahrain.

Method: This is a prospective study on newborns from May to September of 2015. Total Serum Bilirubin (TSB) was measured from day one of life to day seven for all neonates. G6PD activity was documented from the records.

Results: One hundred twenty-five children were included in the study; 71 (56.8%) were newborns with normal G6PD activity and 54 (43.2%) were G6PD reduced activity. The mean TSB was significantly higher in newborns with G6PD reduced activity 11.23 ± 3.50 mg/dl compared to newborns with G6PD normal activity 9.52 ± 4.16 mg/dl (P-value 0.001).

The mean TSB on day one for newborns with G6PD reduced activity was higher compared to newborns with G6PD normal activity; 6.37 ± 6.76 mg/dl and 1.82 ± 1.94 mg/dl respectively (P-value 0.078).

Conclusion: The course of hyperbilirubinemia in children with G6PD reduced activity was different compared to children with G6PD normal activity. The mean TSB was significantly higher in newborns with G6PD reduced activity. A bilirubin level of 6mg/dl during the first neonatal day could be an indicator for the presence of G6PD reduced activity in the newborn.