PREVALENCE OF GLUCOSE-6-PHOSPHATE DEHYDROGENASE (G6PD)
INTERMEDIATE IN THE NEWBORNS AND THE ACCURACY OF
SEMIQUANTITATIVE FLUORESCENT SPOT TEST (FST) AS SCREENING TOOL

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Aim: To determine the correlation between G-6-P-D Intermediate status and the actual G-6-P-D enzyme levels in infants during neonatal period at UMMC.

Methods: This study was a hospital-based observational cohort study on newborn delivered, admitted, and subsequently has assessment of jaundice at University Malaya Medical Centre (UMMC) Kuala Lumpur from 1st January 2008 to 30th June 2009. The detection of G-6-P-D Intermediate status was performed on cord blood sample with Semiquantitative Fluorescent Spot Test. A subgroup analysis was carried out from April 2008 to September 2009 to study the association between the actual G-6-P-D enzyme levels and G-6-P-D Intermediate status.

Results: The prevalence of G-6-P-D Intermediate was 1.51% with male to female ratio was 1:35. The prevalence was highest among Chinese (2.12%), followed by Malay (1.7%) and Indian (0.58%). From the subgroup analysis the prevalence of enzyme deficient infants was 7.5%. The enzyme analysis in G-6-P-D intermediate infant only 46% were actually enzyme deficient with the FST having 32% sensitivity and 98% specificity and the worrying facts that is FST misses 2.8% of G-6-P-D normal infants which actually enzyme deficient.

Conclusions: G-6-P-D intermediate infants diagnosed by FST need actual confirmatory G-6-P-D enzyme levels.