

Detection of Glucose 6 Phosphate Dehydrogenase G6PD Enzyme Deficiency in the Field for treatment of Malaria (2006)

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Malaria is the first priority health problem in Myanmar and early diagnosis with prompt and effective treatment is essential for reduction of morbidity and mortality due to the disease. Primaquine is the only effective drug to prevent relapses of liver form of *Plasmodium vivax* and *Plasmodium ovale* and can also be used to kill gametocyte form of *Plasmodium falciparum* and *Plasmodium malariae*. Primaquine can cause haemolysis in Glucose-6-Phosphate Dehydrogenase G6PD deficient individual and prevalence of G6PD deficiency varies among different ethnic races. Malaria survey was done during 2001-2003 in Mon and Shan States and prevalence of G6PD deficiency was mixture. In normal person the test shows orange ring due to the presence of G6PD enzyme which is absent in G6PD deficient person. Among 1079 samples tested, 47 (4.5%) was found to have severe type of G6PD deficient person. In relation to the ethnic region, G6PD deficiency rate was 5.5% (29/338) among Burmese, 3.2 % (6/191) among Chinese, 3.4% (5/146) among Indians, 3.3 % (3/92) among Mons, 5.1% (3/59) among Shans and 6.7% (1/15) among Kayin races. This rapid test can detect severe G6PD deficiency in the field, thus primaquine can be prescribed safely to malaria patients.