

# **Diagnostic Accuracy of DCIP Test (Dichlorophenolindolphenol Precipitation) and NESTROFT (Naked Eye Single Tube Red-cell Osmotic Fragility Test) in Haemoglobin E Screening.**

**Aung Kyaw Kyaw**, Tin Tin Thein, Zaw Win Tun, Khin Moe Aung, Saw Myat Thwe, Mee Mee Lwin, Su Su Hlaing, Ne Win

**The Myanmar Health Sciences Research Journal 2011: No. (1) 10-14**

## **Abstract**

Various screening methods are used for detection of the HbE. It is important to find out the reliable test which is also cost effective in screening large population for the prevention of severe anaemia. This study was conducted to determine the accuracy of the Dichlorophenol indolphenol precipitation (DCIP) test and NESROFT (Naked Eye Single Tube Red-cell Osmotic Fragility Test) for detection of Hb E disease. In this cross sectional, field and laboratory - based descriptive study, a total of 155 high school students were selected by simple random sampling and DCIP test and NESTROFT were employed as screening tools. Haemoglobin Electrophoresis (Iso - Electric Focusing method) was used as a confirmatory method for diagnosis of Hb E. The diagnostic accuracy parameters of the tests; sensitivity and specificity were 92%, 96.92% in DCIP test and 84%, 70% in NESTROFT. The positive predictive value and negative predictive value of DCIP test were 85.19% and 98.44% as well as 35% and 95.79% for the NESTROFT. When combined DCIP test and NESTROFT were used as the screening tools which had more preferable sensitivity of 96%. Comparing the above result indicates that the combined method, could be used as an effective preliminary screening among the Myanmar population.