

Abstract

Background: Current data on the prevalence of hemoglobinopathies among Lahu in northern Thailand are limited.

Objective: To investigate the prevalence of thalassemia carriers among Lahu hill tribe people in Chiang Rai Province, Thailand.

Materials and Methods: We conducted a cross-sectional study in 2 phases. The first retrospectively analyzed data from antenatal clinics attended by Lahu women between January 2011 and June 2012. The second phase was prospective and included the husbands of Lahu women. In the second phase, 116 Lahu adults were administered a questionnaire and blood tests for osmotic fragility (OFT) and dichlorophenol indophenol precipitation (DCIP). The hemoglobin (Hb) type of those positive for either or both tests was identified by HPLC and PCR.

Results: Data from 358 Lahu women in the first phase showed a mean age of 23.2 y (range 13–46 y, SD 6.83), 68.5% were primigravida. Fifty-eight had abnormal mean corpuscular volume (MCV), 87 positive OFT, 18 positive DCIP test, and 3.0% positive results in both tests. Eight of 83 participating husbands had abnormal MCV, 8 positive OFT and 2 positive DCIP test. In the second phase, 52.2% of 116 participants were women, mean age of 33.7 y (range 18–68 y, SD 11.2), 38 positive OFT, 10 positive DCIP test, and 3.7% positive results in both tests. Hb typing showed 5 participants with HbE, 1 β -thalassemic, 1 HbE homozygous, and no α -thalassemia-1 (SEA) was identified.

Conclusion: Provision of a thalassemia screening in health care settings in remote areas of Thailand is an ongoing need.