

High Incidence of Haemoglobin-E in Tribal Populations of Tripura, North East India

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ABSTRACT A large cohort of 80 randomly selected individuals from 12 different tribal groups and a group of 196 tribal school children of Tripura, N.E. India was studied to analyse the incidence and origin of HbE mutation in these populations. β^E allele frequency was highest among Mareks (0.5625). In three tribal groups mutant allele frequency was higher than the normal allele frequency of β -globin gene. Analysis of 30 β^E mutation bearing chromosomes shows that this mutation is present only on four different haplotype backgrounds, all linked to framework 2.(5'+++ β^E - 3') haplotype was most prevalent in the present study group, which indicates the origin of codon 26 (G⁺!A) as a single mutation in this region. Among the 104 randomly selected individuals of Debbarman tribals of mixed age group β^E frequency was 0.4086, while in the 196 school children aged 12 to 14 years and belonging to same tribal group β^E frequency was 0.4923. This apparent increase in β^E frequency cannot be treated as clear-cut indication of selection of mutant allele.