Haematological Responses in High- and Lower-Altitude Monpas of Arunachal Pradesh in Northeast India

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Abstract: Several studies have reported that haemoglobin (Hb) concentration and haematocrit (HCT) values increase with increasing altitude. However, this trend is not universal. Tibetans appear to have a reduced haematological response to hypoxia compared to Andeans and seem to have Hb and HCT values that lie within the range of healthy residents at sea level. This study aims to understand the haematological responses of the high- and lower-altitude Monpas vis-a-vis other high altitude populations. Haematological data of Monpa adults (20–49 years) were collected from high altitude villages of Tawang circle and from lower altitude villages of Kalaktang, and Dirang circles. The prevalence of mild and moderate anaemia was found to be higher not only among adults of lower altitude; the prevalence is also higher among the males than females. ANOVA results on haematological traits in respect of age and household income indicate that altitude differences in Monpa populations were not clearly perceptible. However, results of ANCOVA suggest an association between altitude and haematological traits after adjusting for age and household income.

Key words: Monpas, haematological traits, altitude, socio-economic factors, anaemia