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HLA Association with Type 2 Diabetes Mellitus and Hypertension among the Kami Population from Sub-Himalayan West Bengal

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ABSTRACT The Kami population is an Indo-Aryan caste group from the Gorkha community of the Sub-Himalayan region. This study aims to investigate the association of Human Leukocyte Antigen (HLA) genes with Type 2 Diabetes Mellitus (T2DM) and hypertension (HT) among the Kami population. One hundred fifty unrelated Kami individuals were recruited from the sub-Himalayan region of West Bengal, India. Twenty of them had a history of T2DM, and 15 had HT. The enrolled individuals provided blood samples, which were then utilized to perform HLA typing using PCR-SSP A, B, and DR typing kits. The findings showed that T2DM cohort had a higher frequency of HLA-B*13 and HLA-B*15 and a lower frequency of HLA-A*33. Conversely, a significantly high frequency of HLA-A*24 and HLA-B*13 was observed among the HT cohort. The study demonstrates the presence of susceptibility genetic factors at HLA loci for T2DM and HT among the Kami population.