Association between HLA-A and -B polymorphisms and susceptibility to Henoch-Schönlein purpura in Han and Mongolian children from Inner Mongolia

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ABSTRACT. We examined a possible association between HLA-A and -B polymorphisms and susceptibility to Henoch-Schönlein purpura (HSP) in Han and Mongolian children in Inner Mongolia, through a case-control study. Two hundred and sixty-eight unrelated children were enrolled, including 56 Mongolian and 50 Han children with HSP, 66 healthy Mongolian and 96 healthy Han children as a control group. HLA-A and -B alleles were indentified by PCR-sequence-specific oligonucleotide analysis and were further analyzed by PCR-sequencing-based typing (SBT). Frequencies of HLA-A*11, HLA-B*15 in Mongolian patients and HLA-A*26, HLA-B*35, HLA-B*52 in Han patients were higher than those in the corresponding control group (P < 0.05), while frequencies of HLA-B*07 and -B*40 in Mongolian HSP patients were lower than those in the control group (P < 0.05). Further analysis using PCR-SBT showed that all HLA-A*11 were HLA-A*1101, and most HLA-B*15 were HLA-B*1501 in Mongolian HSP patients. All HLA-A*26 were...
HLA-A*2601 and HLA-B*35 were mostly HLA-B*3503 in Han patients. There were more Han patients with severe manifestations than Mongolian patients (P < 0.05). Frequencies of HLA-A*26, HLA-B*35 and HLA-B*52 in Han patients were higher than in Mongolian patients (P < 0.05). We conclude that HLA-A*11(*1101) and -B*15(*1501) are associated with susceptibility to HSP in Mongolian children and HLA-A*26(*2601), HLA-B*35(*3503) and HLA-B*52 are associated with susceptibility to HSP in Han children. HLA-B*07 and -B*40 may be protective genes in Mongolian children. The different frequencies of HLA-A and -B in Mongolian and Han children may be responsible for the different manifestations in these two ethnic groups.

**Key words:** Henoch-Schonlein purpura; Children; Mongolian; Han; HLA-A; HLA-B