

〔原著論文〕HLA A19 and B14 frequencies increased among Parsis from Mumbai

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Summary

The Parsi community immigrated to India from Iran to avoid religious persecution by Muslims during 715AD. They are a tightly knit isolated community numbering 90,000 living chiefly in Mumbai, India. They have maintained separate identity because of own strict religious tenets and rigidity of caste system prevailing in India. I report here HLA polymorphism in 67 Parsi compared with other populations of India and world. The standard NIH two-stage microlymphocytotoxicity assay was used with a minimum of three sera for a given specificity to define the HLA antigens. The significant observation was, they had the highest percentage gene frequency for HLA B14 (28%) and HLA A19 (41%). The two locus haplotype analysis showed a significant haplotype frequency (HF) and linkage disequilibrium (LD) for HLA A19-B14. This observation was concordant with previous studies on Parsis reported in Third Asia-Oceania Histocompatibility Workshop and conference. Molecular subtyping using reverse line blot technique showed that HLA B*1405 (GF = 19%) and HLA B*1401 (GF = 9.5%) for B14 while A*3001 (GF = 17.6%) and A*3303 (GF = 15%) for A19 were the subtypes present. Haplotypes A*3001 - B*1401 and A*3303 - B*1405 were the significant haplotypes observed among the Parsi community. When the results were compared to other Indian caste groups and major world populations the frequency of HLA B14 was the highest among the populations reported. These observations could be due to selective pressures operating on the highly inbreeding and diminishing parsi population It will be interesting to know how this genetic diversity is maintained and is there any impact of this variation on the health and disease among Parsi community.

Keywords : HLA A19, B14, Parsi, Selection.