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Mini Review

Brief review of HLA profile and clinical presentation of multiple sclerosis in Iran

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HLA typing, the natural course and clinical findings of 79 and 200 definite MS cases in Iran was respectively reviewed [1,2].

Results drawn from our 79 Iranian MS patients revealed an association between MS and HLA types A 24, DR 2, and DR 15, each with a relative risk of 1.9 times of controls.

This genetically determined increased risk is best explained by assuming the existence of an MS susceptibility gene which has been identified in linkage studies with HLA DR 15 and DR 2 loci on chromosome 6. This association of DR 2 and DR 15 HLA types with MS in Iranian patients is in line with studies done in other parts of the world [3-6].

In the analysis of HLA class 1, we found a positive association with A 24 but no association with B locus alleles. The association of HLA-A locus in Iranian MS differs from previous studies in other parts of the world [4,7,8] as well as Asian countries [9,10].

In fact, Indian investigators identified an association between HLA B12 and MS [9].

Of interest is under-representation of the following alleles in Iranian MS patients: HLA-A28, B5, B14, CW2 ($p < 0.05$) and HLA B15, B 40, DR-4, DR-52, and DQ3 ($p < 0.005$).

Whether these alleles have any protective role against MS in this geographic region to be determined.

Iran is traditionally thought to be situated in a low risk zone for MS [2], but currently the incidence of the disease has been raising.

In Iran MS presents with involvement of multiple sites in

the Central Nervous System (CNS) including the cerebrum, cerebellum or brain stem, which is similar to its behavior in the Caucasian population. Having the relapsing- remitting MS (RRMS) as the most frequent type of presentation, followed by Primary Progressive (PPMS) form with a higher age at onset and worse prognosis, and female preponderance, in both types are in agreement with European and Latin American studies [11-14]. The most common presenting symptoms of pyramidal and sensory involvement in the present cases have also been reported from neighboring Middle East countries and Europe [11,15]. Compared with RR group, Secondary Progressive (SPMS) had more annual attacks with pyramidal or cerebellum dysfunction as their presenting signs. The 28 patients with EDSS score 3 after 10 years and 24 with EDSS score 2 after five years indicate a benign course for MS in this country.

Optico-spinal MS (OSMS) which is a common presentation of the disease in Asian countries and is called Asian type [16], is not a prominent feature here, probably due to different

HLA typing. Three percent of our patients suffered from specific form of OSMS which has different features compared to Asian ones [17,18]. In which a paucity of brain lesions was accompanied by short spinal segment involvement. It has a benign course with negative.

CSF oligoclonal band and different HLA from conventional MS.

It is believe that we are facing a raising incidence of MS similar to other countries [14-19].

This may be explained by increased survival, and improved laboratory and radiological diagnosis. However a decreased number with SP form which is a natural endpoint of the RR



type may indicate that more new cases are being diagnosed. However other possibilities should be looked for.

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