

Study of HLA-Linked Genes in Paranoid Schizophrenia in an Indian Bengalee Population

Monojit Debnath[#], S.K. Das^{*}, N.K. Bera^{*}, C.R. Nayak[@] and T.K. Chaudhuri[#]

[#] Cellular Immunology Laboratory, Department of Zoology, University of North Bengal, Siliguri 734 430, West Bengal, India

^{}Department of Psychiatry, North Bengal Medical College & Hospital, Siliguri, West Bengal, India*

[@] Computer Centre, University of North Bengal, Siliguri 734 430, West Bengal, India

KEYWORDS Paranoid schizophrenia; etiology; HLA antigens; association; paranoid symptoms

ABSTRACT Schizophrenia is a major psychotic disorder with a strong genetic component and molecular etiology remains enigmatic. They form a heterogeneous and poorly understood collection of disorders of which Paranoid Schizophrenia is the best diagnosed and least severe clinical subtype of Schizophrenia. Involvement of biological factors has been suspected for long. In the present investigation, the incidence of HLA Class-I antigens has been studied to understand the role of HLA genes in the patients with paranoid schizophrenia with the objectives to explore a possible immunogenetical etiology of paranoid schizophrenia. A case-control study design was performed. Psychiatric reference data were available for total number of 30,000 cases attended between 1998 and 2004. A total number of 120 patients with paranoid schizophrenia belonging to the India born Bengalee population were initially enrolled for the study and DSM-IV criteria was used for the diagnosis of the patients. Upon longitudinal follow up 70 patients turned out to be the cases of other psychotic conditions and PCR-based molecular typing (PCR-SSP) method was applied to 50 genuine cases of Paranoid Schizophrenia. A total numbers of 100 healthy donors belonging to the same ethnic background were considered as controls. The present investigation shows that some of the HLA antigens are associated with paranoid schizophrenia and especially significant increases are found for HLA-A*03 gene which may influence susceptibility to paranoid schizophrenia. The study reveals important interactions between HLA genes and paranoid schizophrenia. This preliminary observation may help to understand the etiological basis of this disorder.