Abstract:

Systemic lupus erythematosus often abbreviated to **SLE** or **lupus**, is a chronic systemic autoimmune disease (or autoimmune connective tissue disease) that can affect any part of the body. The tissue deposition of auto- antibodies and immune complexes (ICs) could cause inflammation and injury of multiple organs. It is one of the best examples of a systemic autoimmune disease where multiple factors are associated with the patho-aetiology of the disease. Compliment Recptor-1 and MHC also play an important role in the development of the disease. CR1(Compliment receptor)1, a membrane glycoprotein found on macrophages faciliates uptake of (C3b and C4b) coated apoptotic bodies.It is not only important for complement activation but also plays a critical role in clearing circulating immune complexes. Deficiency in CR1 levels has been reported in SLE patients and the MHC is referred to as the **HLA complex** in humans and it is the most gene-dense region of the mammalian system playing an important role in the immune system,autoimmunity and reproductive process. MHC is divided into Class I, Class II, and Class III genes each encoding glycoproteins on the surface of the nucleated, antigen presenting cells which help in the antigenic peptide presentation to T-cells. The association between MHC and a disease is complex and should not be interpreted that the expression of the particular MHC gene has caused the disease. In the present study we have analyzed the role played by the polymorphism of CR1 and HLA Class I group alleles and the effect of the polymorphism on the disease status of the SLE patients. The polymorphism study was carried out by PCR-RFLP for CR1 and PCR-SSP HLA A-group alleles. Our study demonstrates that the proportion of A*11 was higher and was associated with increased risk of SLE.The frequency of HLA–A alleles was comparable between SLE patients and control participants and also between the three ethnic groups. No difference in occurrence of CR1 alleles was detected between SLE and control participants.