INTRODUCTION

The D8/17 specific monoclonal antibody has not only been found to bind B cell surface structures but also to diverse tissue sites in human such as myocardium, smooth muscle, skeletal muscles and epithetical cells the monoclonal antibody appears to bind to the cytoskeleton helical coil/coiled structures myosin and tropomysin. It is on interest that D8/17-specfic monoclonal antibody was found to bind to streptococcal M protein ***(Kemeny et al., 2003)***.

Because of such cross reactivities, structural similarities may exist between the cytoskeletal proteins myosin and tropomyosin, surface antigens present or a subset of B cells and streptococcal M protein. It is unclear how these finding relate to the model of molecular mimicry that is thought to lead to the symptoms complex of rheumatic fever. An elevated expression of alloantigen D8/17 on B lymphocytes has been proposed as a susceptibility marker in rheumatic fever and rheumatic heart disease ***(Hoekstra et al. ,2001)***.

It has been suggested that the D8/17 antigen may act as a streptococcal binding site on B cells and consequently become up-regulated after an infection, with B cells acting as antigen-presenting cells and influencing T-cell specific cytotoxicity to heart and brain cell ***(Kemeny et al., 2003)***.

The ethnic background of the patient group regarding D8/17 B cell expression in rheumatic heart disease might be a relevant factor. For example 90-100% of the rheumatic lever patients in the United States were found to have elevated D8/17 B cell expression whereas it was found in only 66% of rheumatic fever subjects in India, and 33% in Caribbean people ***(Kaur et al., 2004)***.

Khanna et al. (1989) suggested that the D8/17 expression on B-cell is inherited possibility along autosomal recessive lines.

Harrington (2005) suggested that in populations with high incidence of rheumatic fever, D8/7 could be used as a screening test to density a group at increased risk of developing rheumatic fever, so that D8/17 might be incorporated into Jones criteria for the diagnosis of rheumatic fever.

It is clear that D8/17 expression is not merely a marker of streptococcal infection, as it is not increased in post-streptococcal glomerulonephritis and uncomplicated streptococcal tonsillitis. However, post streptococcal reactive arthritis is associated with elevated levels of D8/17 ***(Zemel et al., 2007)***.

Post-streptococcal reactive arthritis is a sterile arthritis associated with antecedent streptococcal infection in patients not fulfilling the Jones criteria for acute rheumatic fever. The major differences between acute rheumatic fever and post-streptococcal reactive arthritis are: onset within 10 days of group A streptococcal infection, prolonged or recurrent arthritis, poor symptomatic response to salicylate and low risk of developing carditis ***(Daniel, 2008)***