Anti-β2-Glycoprotein I Autoantibody Expression as a Potential Biomarker for Strokes in Patients with Anti-Phospholipid Syndrome

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Anti-phospholipid syndrome (APS) is an autoimmune disease. Cerebral ischemia associated with APS occurs at a younger age than typical atherothrombotic cerebrovascular disease and is often recurrent, This study sought to determine the frequency rates of anti-cardiolipin (aCL) dependent on the presence of β2-GPI, anti-β2-glycoprotein I (aβ2-GPI), and anti-phosphatidyl serine (aPS) IgG autoantibodies among stroke patients. Stroke patients and control subjects recruited from Mosul, Erbil, and Dohuk provinces in Northeren Iraq were evaluated. All cases were under 50 years-of-age and had no recognizable risk factors. Using ELISA, the results indicated that the frequency of aβ2-GPI was 14/50 (28%), aCL was 11/50 (22%), and aPS was 9/50 (18%) among stroke patients. In contrast, aCL was detected in 2/30 (6.7%) of control subjects; each of the other anti-phospholipid antibodies (APLA) was never observed. Of all the aβ2-GPI+ cases, the incidence of stroke patients having the combined profile of aβ2-GPI + aCL was 11/14 (78.6%) and of aβ2-GPI + aPS was 9/14 (64.3%). Only 2/14 (14.3%) of these aβ2-GPI+ patients also expressed aCL in the absence of aPS. In none of the APS/stroke patients were aCL or aPS expressed in the absence of the aβ2-GPI. Conversely, aβ2-GPI as a sole marker was seen in 3/14 (21.4%) of these patients (i.e., in absence of either other marker). It can be concluded from these studies that the among the three major forms of APLA examined, the presence of aβ2-GPI IgG autoantibodies appeared to correlate best with stroke in patients who were concurrently suffering APS.

Biography

Prof Dr. Husham Bayazed has completed his PhD from University of Mosul, College of Medicine. He is now Consultant Immunologist at Scientific Research Center, University of Zakho / Kurdistan Region. He is specialist in clinical Immunology with interest in Neuro- immunology and has published more than 25 papers in reputed journals and has been serving as scientific reviewers of many local and international medical journals. In addition of being Fellowship of ISC, Infection, Cancer and Immunology Advisory Board Member (EUROMDnet) (Belgium), Membership of World Stroke Organization, Membership of Metabolomics (USA), and Membership of American Association of Science & Technology.

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