

ANTI- β 2-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, is often recurrent, and is associated with high positive IgG anti-phospholipid (GPL) unit levels. This study sought to determine the frequency rates of anti-cardiolipin (aCL) dependence on the presence of β 2-GPI, anti- β 2-glycoprotein I (a β 2-GPI), and anti-phosphatidyl serine (aPS) IgG autoantibodies among stroke patients, and thus demonstrate the importance of testing for a β 2-GPI autoantibodies. Stroke patients and control subjects recruited from Mosul, Erbil, and Dohuk provinces in Northern Iraq were evaluated. All cases were under 50 years-of-age and had no recognizable risk factors. Using ELISA to evaluate the presence of IgG isotype of aCL, a β 2-GPI, and aPS autoantibodies in their blood, the results indicated that the frequency of a β 2-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 a β 2-GPI+ cases, the incidence of stroke patients having the combined profile of a β 2-GPI + aCL was 11/14 (78.6%) and of a β 2-GPI + aPS was 9/14 (64.3%). Out of these, only 2/14 (14.3%) of a β 2-GPI+ patients also expressed aCL in the absence of aPS. The frequency of patients expressing all three markers was only 9/14 (64.3%). In none of the APS/stroke patients were aCL or aPS expressed in the absence of the a β 2-GPI. Conversely, IgG a β 2-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 among the three major forms of APLA examined, the presence of IgG a β 2-GPI autoantibodies appeared to correlate best with stroke in patients who were concurrently suffering APS.

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