

Anti-Phosphatidyl Serine Autoantibody Expression as a Potential Biomarker for Patients with Coronary Events with Anti-Phospholipid Syndrome

Husham Bayazed¹, Zainalabideen Abdullah²

¹*Immunology, Technical & Health Institute-Zakho Kurdistan, Iraq*

²*Microbiology, Medical College, Iraq*

Background:

This study sought to determine the frequency rates of anti-phosphatidyl serine (aPS), anti-cardiolipin (aCL) dependent on the presence of β_2 -GPI, and anti- β_2 -glycoprotein I ($\alpha\beta_2$ -GPI), IgG autoantibodies among patients with coronary events.

Methods:

For this study, 50 patients with coronary events in form of angina and 50 healthy individuals as control subjects recruited from Mosul, Erbil, and Dohuk provinces in Northern Iraq between March 2004 and March 2005 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 aPS, aCL, and $\alpha\beta_2$ -GPI autoantibodies in their blood.

Results:

The results indicated that the frequency of aPS was 12/50 (24%), $\alpha\beta_2$ -GPI was 9/50 (18%), and aCL was 6/50 (12%) among patients. In contrast, aCL was detected in 2/50 (4%) of control subjects; each of the other anti-phospholipid antibodies (APLA) was never observed. Of all the aPS⁺ cases, the incidence of patients having the combined profile of aPS + $\alpha\beta_2$ -GPI was 9/12 (75%) and of aPS+ aCL was 6/12 (50%). Only 3/12 (25%) of these aPS⁺ patients also expressed $\alpha\beta_2$ -GPI⁺ in the absence of aCL. The frequency of patients expressing all three markers was only 6/12 (50 %). In none of the APS positive patients were aCL or $\alpha\beta_2$ -GPI expressed in the absence of aPS. Conversely, IgG aPS as a sole marker was seen in 3/12 (25%) of these patients (i.e. in absence of either other marker).

Conclusions:

It can be concluded from these studies that among the three major forms of APLA examined, the presence of IgG aPS autoantibodies appeared to correlate best with patients having angina who were concurrently suffering APS.