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Antiphospholipid Antibodies as Independent Predictors of Neurological Failure

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Objectives: Antiphospholipid Syndrome (APS) is a systemic autoimmune disease characterized by thrombophilic state and circulating antiphospholipid antibodies (aPL) including anti beta2-GPI. Central nervous system involvement is one of the most prominent clinical manifestations of APS and includes thrombotic events, psychiatric features and a variety of other non-thrombotic neurological syndromes. The aim of this study was to investigate association between nontrombotic neurological and cardiac manifestations in patients with antiphospholipd syndrome (APS) as well as their connection with type and level of antiphospholipid antibodies.

Methods: Our study comprises a total of 608 patients: 420 primary APS (PAPS) patients and 188 SLE patients with secondary APS (SAPS). aPL analysis included detection of a CL, aß2GPI and LA. Antiphospholipid antibody (aPL) analysis included detection of aCL(IgG/IgM), ß2GPI(IgG/IgM) and LA and served to evaluate associations with distinct neurological and cardiac manifestations.

Results: Presence of a CL IgG was more common (p=0.001) in SAPS and LA in PAPS patients (p=0.002). High ß2GPI IgM levels (>100PLU/ml) were more common in epilepsy (p=0.00001) in PAPS and in transient ischemic attack (p=0.029) in SAPS. High ß2GPI IgG levels (>100PLU/ml) were more common in epilepsy (p=0.035) in SAPS. Chorea, migraine and epilepsy occurred more often in SAPS and headache and depression in PAPS. We revealed statistical significance considering the presence of aCL IgG and acute ischemic encephalopathy in SAPS, aCL IgM and epilepsy in SAPS, aCL IgM and migraine in PAPS,ß2GPI IgG and chorea in SAPS and ß2GPI IgM and TIA and epilepsy in PAPS. LA was linked to depression, transient global amnesia and migraine in PAPS. Patients with non stable angina pectoris were more likely to develop TIA in both PAPS and SAPS, epilepsy and transient global amnesia in PAPS and acute ischemic encephalopathy in SAPS. Patients with valve vegetations were more prone to epilepsy and depression. Other non-thrombotic neurological manifestations occurred in both groups of patients without any significant correlation (Table).

Conclusion: Certain aPL type and levels are associated with distinct neurological nontrombotic manifestation, suggesting their predictive role. There is strong link between some nontrombotic neurological and cardiac manifestations in APS patients, suggesting complexity and evolutionary nature of APS.

Biography:

Ljudmila Stojanovich received her Ph.D. in Medicine, with the thesis “Neuropsychiatric manifestations in patients with Systemic Lupus Erythematosus” in 1999. She is the scientific director in the Bezhanijska Kosa, University Medical Center of Belgrade University, where she is currently a Full Research Professor. Dr. Stojanovich’s research focuses on Systemic Lupus Erythematosus, Antiphospholipid Syndrome and Vaccination in patients with Autoimmune Rheumatic diseases. She is an author of three monographs and of about 250 articles. She is in Editorial Boards (LUPUS/LONDON), the reviewer in the “CURRENT CONTENSTS” or “Science citation index”, like Cellular and Molecular Neurobiology and others. She is a member in number of International Projects. She was an Invited Speaker for many lectures in Congresses and Symposia; Prof. Stojanovich is EULAR Honorary Member; the Chairman in the International Congress “Antiphospholipid syndrome (Hughes syndrome)”, 2013, co- chairman and the lector “LUPUS ACADEMY EASTERN EUROPEAN ROAD SHOW of EULAR”, 2016.