ANGIOLOGICAL ALTERATIONS AND IMMUNO-INFLAMMATORY MECHANISMS IN PRIMARY ANTIPHOPHOLIPID SYNDROME

By: Dr. Dér Henrietta

Kálmán Laki Doctoral School
Debrecen, 2010

Summary

APS is an autoantibody-mediated acquired thrombohilic state. Pathological autoantibodies, mainly anti-B2GPI has anti-endothelial activity. By binding to the endothelial cells it shifts the endotelial cells towards a prothrombotic and proinflammatory state. These functional changes can be detected with sensitive angiological methods, which are already present in the current diagnostic repertoire. The aim of the study was therefore to model the immune-inflammatory changes mediated by cytokines in primary APS, in parallel with the assessment of angiological parameters, reflecting the endothelial dysfunction. We gained new information on primary APS, which aids in the better understanding of the pathomechanism, on the other hand helps to identify angiological disturbances behind the clinical symptoms. We could verify T-cell activation signified by a predominant Th2 response. With the aid of the parallel functional and morphological assessment, we found abnormal arterial elasticity, signifying endothelial dysfunction, pathological arterial stiffness, characteristic to early atherosclerosis, and the early sign of atherosclerosis, the increment in carotid IMT.

We found a correlation between the immuno-inflammatory and angiological parameters, soluble IL4 and carotid IMT, as well as pulse wave velocity (PWV) and augmentation index. We found a similar association between the percentages of CD8+ cells and PWV; also within CD8+ cells, we could identify regulatory intracellular IL10+ cells. Our results could be important in the development of biological therapies in the future.

Keywords: antiphospholipid syndrome, flow-mediated vasodilation, endothelial dysfunction, carotid artery intima-media thickness, stiffness parameters

Kulcsszavak: antifoszfolipid szindróma, flow-mediált vasodilatáció, endothel diszfunkció, carotis artéria intima-média falvastagság, stiffness paraméterek,