

---

**COGNITIVE DECLINE CORRELATES WITH ANTICARDIOLIPIN ANTIBODIES AND ANTI-DSDNA IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS**

A. Bogaczewicz<sup>1</sup>, J. Kowalski<sup>2</sup>, J. Bogaczewicz<sup>3</sup>, A. Wozniacka<sup>3</sup>, T. Sobow<sup>1</sup>

<sup>1</sup>Medical Psychology, Medical University of Lodz, Lodz, Poland ; <sup>2</sup>Internal Diseases & Cardiological Rehabilitation, Medical University of Lodz, Lodz, Poland ; <sup>3</sup>Dermatology & Venerology, Medical University of Lodz, Lodz, Poland

---

### Introduction

Cognitive dysfunction (CD) affects 10-36% of patients with systemic lupus erythematosus (SLE). Its pathogenesis comprise direct neurocytotoxicity, vasculopathy, thrombosis, hipercholesterolemia and atherosclerosis. The aim of this study was to evaluate CD in SLE patients and to investigate whether it is influenced by selected immunological and cardiological parameters.

### Methods

Thirty-two SLE patients in remission were enrolled. Anti-cardiolipin and anti-dsDNA antibodies were estimated using immunoenzymatic techniques. Transthoracic echocardiography was performed using Acuson CV70. Since at least some tests proposed by the American College of Rheumatology for neuropsychological evaluation have Polish language version, we have used the Cambridge Neuropsychological Test Automated Battery (Cantab) that employs non-verbal stimuli and requires non-verbal responses. The following Cantab tests were used: Motor screening (MOT); Big little circle (BLC); Paired associated learning (PAL); Stockings of Cambridge (SOC); Graded naming test (GNT).

### Results

In SLE results obtained in BLC, PAL, SOC PSMM, and GNT were lower than those of controls.

SOC Mean initial thinking time correlated with ACL IgG ( $r=0.42$ ;  $p=0.42$ ) and anti-dsDNA antibodies ( $r=0.47$ ,  $p=0.23$ ) and, also, with aortic-diameter ( $r=0.48$ ;  $p=0.036$ ). SOC Mean subsequent thinking time negatively correlated with Left-ventricular-end-systolic diameter ( $r=-0.5$ ;  $p=0.02$ ). GNT correlated positively with posterior-wall-systolic-diameter ( $r=0.45$ ;  $p=0.049$ ) and interventricular-septum-systolic diameter ( $r=0.61$ ;  $p=0.005$ ).

### Conclusions

SLE patients are cognitively compromised. Immunological and cardiological correlates may indicate underlying vascular brain damage. Biological explanation of the observed correlates is, however, unclear and possible causality needs further studies to become elucidated.