

ELEVATED LEVEL OF SERUM ENA-78 INDICATES A LINK BETWEEN OBSTRUCTIVE SLEEP APNEA AND ATHEROSCLEROSIS

A. Nahorecki (1), A. Szuba (2) , H.Martynowicz (3), M. Szponder (4), D. Janczak (4), K.Postrzech-Adamczyk (5),

1. Internal Medicine Dept, St. Lucas Hospital, Jeleniogorska street 4, 59-700 Boleslawiec, Poland, a.nahorecki@gmail.com

2. Angiology, Hypertenion and Diabetology Clinic, Medical University in Wroclaw, Borowska street 213, 50-556 Wroclaw, Poland, szubaa@yahoo.com

3. Internal Medicine, Occupational Diseases and Hypertension Clinic, Medical University in Wroclaw, Borowska street 213, 50-556 Wroclaw, Poland, kc@usk.wroc.pl

4. Vascular, General and Transplantation Surgery Clinic, Medical University in Wroclaw, Borowska street 213, 50-556 Wroclaw, Poland, mateusz.szponder@wp.pl

5. Pulmonology Clinic, Lower Silesian Pulmonology Center, Grabiszynska street 105, 53-439 Wroclaw, Poland, kpostrzech.adamczyk@gmail.com

Sleep apnea syndrome (SAS) is a risk factor for cardiovascular disease. Some reports point to the role of SAS in inflammation and oxidative stress. The study was performed to compare serum inflammatory factor levels in patients with carotid artery stenosis, and with or without coexisting SAS. Also, we aimed to pinpoint a molecule that may be crucial for the inflammatory process correlated with intermittent hypoxia. 71 subjects scheduled for surgical treatment of carotid artery stenosis were enrolled in the study. Polygraphy was performed the night before surgery. On arousal blood samples were obtained and levels of MCP-1, ICAM-1, IL-1b, IL-4, IL-6, IL-18, TNF-alfa, MMP-1, MMP-9, VCAM-1, VEGF-A, VEGF-D, FGF-2, IFN-gamma, ENA-78, CXCL-8, Eotaxin-2, Pentraxin, PDGF BB, sCD40L, E-selectin were measured. A significant correlation was described between the ENA-78 serum concentration and apnea-hypopnea index ($p=0,05$). Level of MMP-1 positively correlated with minimal oxygen saturation. The concentration of TNF-alfa correlated with average desaturation drop. SAS is highly prevalent in patients with carotid artery stenosis. ENA-78, MMP-1, and TNFalfa serum concentrations were correlated with sleep breathing disorders. This may indicate a link between SAS and atherosclerosis development.

Keywords: stroke, endothelium, CXCL-5, hypoxia, coronary artery, dyspnea, obstructive, endarterectomy