

CHRONIC CHLAMYDIA PNEUMONIA INFECTION CAN IMPACT THE SEVERITY OF STROKE

M.Z. Beridze, E. Devidze, G. Chakhava

Tbilisi State Medical University, Tbilisi, Georgia

Aim: to establish whether the chronic C. pneumonia infection impacts the 1 week outcome of ischemic stroke.

Methods: Eighty five acute ischemic stroke patients were researched for chronic C. pneumonia infection. Blood titers of C pneumonia specific IgG antibodies were tested using ELISA method. Blood signals of NO were measured by Electron Paramagnetic Resonance (EPR). Brachial artery diameter was assessed during the reactive hyperemia, which causes endothelium-dependent vasodilatation. Stroke outcome at 1 week was evaluated by Barthel Index (BI) and modified Rankin Scale (mRS). Statistics performed by SPSS-11.0.

Results: Twenty eight ischemic stroke patients with elevated blood IgG titers to C. pneumonia found to have the decreased blood NO EPR signals against 57 stroke patients negative to C. pneumonia ($p < 0.01$). Stroke patients with increased IgG titers to C. pneumonia revealed the negative correlation with endothelium-dependent vasodilatation of brachial artery ($r = -0.41$; $P < 0.05$) and were associated with poor functional outcome of stroke at 1 week according to BI and mRS ($r = +0.31$; $p < 0.05$ and $r = -0.28$; $p < 0.05$ respectively). In conditional logistic regression model elevated blood IgG titers against C. Pneumoniae were significantly associated with severe course of stroke after adjusting for hypertension, smoking and psychological stress (adjusted OR, 14.61; 95% CI, 3.56 to 58.21).

Conclusion: The study demonstrates an association between the chronic C pneumonia infection and endothelial dysfunction in brachial artery as well as association with severe course of ischemic stroke in first week.