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Circulating autoantibodies against myelin sheath are elevated in patients with atrial fibrillation

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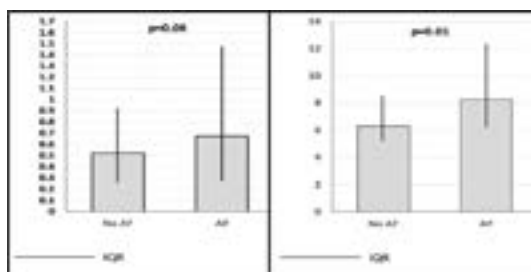
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Atrial Fibrillation (AF) is associated with high risk of cognitive decline and dementia. AF patients have elevated circulating levels of cerebral injury markers, as we demonstrated previously. Peripheral presence of central nervous system (CNS) specific antigens may induce autoantibody production and initiate a cascade of neuroinflammatory events leading to subsequent cognitive deficit / dementia. We aimed to assess the plasma levels of autoantibodies against myelin basic protein (anti-MBP-ab) and myelin oligodendrocyte glycoprotein (anti-MOG-ab) in AF and no AF individuals. Subjects from Intermountain Heart Registry INSPIRE were included in the study; 75 patients had a diagnosis of AF at the time of the blood collection and 25 of them were no AF-controls. All subjects have no history of prior stroke, cognitive decline, neurodegenerative disorders, CNS surgery or trauma. Assessments of auto anti-MBP-ab and anti-MOG-ab antibodies were performed by EIA (My BioSource, Inc). There were no differences in gender ($p=0.16$) and age ($p=0.24$) between AF and no AF groups. The administration of anti-platelet and anti-

coagulant medications was higher in the AF group (84% vs 36%). The univariate values of auto ab are shown in a Figure. After adjustment for age and anticoagulation therapy, Anti-MOG-ab remained significantly higher in AF ($p=0.035$). In this small experimental sample, the AF patients demonstrated higher plasma levels of anti-MOG-ab and a trend in elevation in anti-MBP-ab. Potential mechanistic role of these antibodies in the development of cognitive impairments in AF patient requires further study.



Biography

Oxana Galenko is a Clinical Research Senior Scientist at the Department of Cardiovascular Research of Intermountain Heart Institute at Intermountain Medical Center, Murray, UT. She has published and presented more than 30 papers and abstracts at the reputed journals and international symposia such as American Heart Association, Heart Rhythm Society and American College of Cardiology annual meetings. Her research focuses on understanding the association of cardio vascular diseases with cognitive decline and dementia at molecular level.

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