

17th International Conference on

Clinical and Experimental Ophthalmology

October 01-03, 2018 | Moscow, Russia

Early diagnostics of multiple sclerosis on the basis of changes in choroid

Olga M Andryukhina and Alla A Ryabtseva

Moscow Regional Research Clinical Institute of M F Vladimirsky, Russia

Along with the importance of studies of the retina and optic nerve structure, a special attention is attracted by the state of the choroidal tract of the apple of the eye in patients with multiple sclerosis. As the new possibilities of the choroid visualization have emerged, the interest towards its connection with demyelinating diseases increased. Consequently, the thickness of the choroid became a parameter for the quantitative assessment of the uvea. It can be used to verify the demyelinating processes. It determines the medical and social importance of this research. The present work contains the results of retina and optic nerve examination in 68 patients with relapsing multiple sclerosis and a control group of 23 healthy patients. All the patients underwent an examination of the posterior segment of the eye via optical coherent tomograph (OCT).

Spectralis and a patented method of the quantitative processing of OCT images of the choroid. For the first time the examination of the share of the pore of blood vessels relative to the choroid was carried out in patients with multiple sclerosis, the importance of this factor and the thickness of choroid in the diagnostics of this disease was assessed and a diagnostic model was invented, which increased the index of sensitivity and specificity up to 94.6% and 90.3%. The evaluation of the dynamic pattern of choroid changes received via OCT most brightly characterizes the state of the choroidal tract in this disease and confirms the involvement of the choroidal tract in the pathological process in multiple sclerosis. The changes in choroid thickness and share of the pore of blood vessels relative to the choroid can predict the neurodegenerative processes in the retina and optic nerve. As a result, using of integrated approach to the multiple sclerosis diagnostics, it is important not only to analyze the parameters of the optic nerve, but also the state of the choroid.

Biography

Olga M Andryukhina has graduated with Honours from the Medical Faculty of People's Friendship University of Russia in 2009. Since 2009 till 2011 she studied in the Residency of People's Friendship University of Russia, the Department of Ophthalmology. Since 2011 Olga Andryukhina has been working in the department of ophthalmology in Moscow Regional Scientific Research Clinical Institute of M.F. Vladimirsky. She is a research associate, published 22 scientific works, and a co-author of three patents and one computer program.

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