

Ultrasonic Semiotics of Peripheral Nerves in Multifocal Motor Neuropathy and Amyotrophic Lateral Sclerosis (Short Reports)

N. B. Vuytsik¹, I. A. Zavalishin¹, L. T. Akhmedzhanova², I. A. Stokov²

¹ Research Center of Neurology RAMS, Laboratory of Ultrasonic Researches

² The A. Y. Kozhevnikov Neurological Department of I. M. Sechenov First Moscow Medical State University, Ministry of Healthcare of Russia

Abstract

The results of ultrasonography in patients with multifocal motor neuropathy (10 patients), and 4 patients with amyotrophic lateral sclerosis. Differences are reflected ultrasound signs of 2 groups: the presence of mosaic segmental asymmetric structural changes in patients with MMN and the absence of pronounced structural changes in patients with ALS. The presence of structural changes in the brachial plexus in patients with MMN. In patients with ALS showed apparent fasciculation. Thus the ultrasonic method may be used for the differential diagnosis of patients with MMN and ALS.

Key words: Asymmetric Structural Change the Segmental Peripheral Nerves, Multifocal Motor Neuropathy, Amyotrophic Lateral Sclerosis, Fasciculations.

References

1. *Beekman R., van den Berg L. H., Franssen H., Visser L. H. et al.* Ultrasonography shows extensive nerve enlargements in multifocal motor neuropathy. *Neurol.* 2005. V. 65. N. 2. P. 305–307.
2. *Imamura K., Tajiri Y., Kowa H., Nakashima K.* Peripheral nerve hypertrophy in chronic inflammatory demyelinating polyradiculoneuropathy detected by ultrasonography. *Intern. Med.* 2009. V. 48. N. 7. P. 581–582.
3. *Kerasnoudis A.* Correlation of Sonographic and Electrophysiological Findings in a Patient with Multifocal Motor Neuropathy. *J. Neuroimaging.* 2012. Dec. 17 doi: 10.1111 / J. 1552–6569.2012.00757.
4. *Padua L., Martinoli C., Pazzaglia C. et al.* Intra- and internerve cross-sectional area variability: new ultrasound measures. *Muscle Nerve.* 2012. V. 45. N. 54. P. 730–733.
5. *Slee M., Selvan A., Donaghy M.* Multifocal motor neuropathy: the diagnostic spectrum and response to treatment. *Neurol.* 2007. V. 69. N. 17. P. 1680–1687.
6. *Taylor B. V., Wright R. A., Harper C. M., Dyck P. J.* Natural history of 46 patients with multifocal motor neuropathy with conduction block. *Muscle Nerve.* 2000. V. 23. N. 6. P. 900–908.
7. *Van den Berg-Vos R. M., Franssen H., Wokke J. H. et al.* Multifocal motor neuropathy: diagnostic criteria that predict the response to immunoglobulin treatment. *Ann. Neurol.*, 2000. V. 48. P. 919–926.
8. *Zaidman C. M., Al-Lozi M., Pestronk A.* Peripheral nerve size in normals and patients with polyneuropathy an ultrasound study. *Muscle Nerve.* 2009. V. 40. N. 6. P. 960–966.

Authors

Vuytsik Nataliya Borisovna, Ph. D. Med., Senior Researcher of Laboratory of Ultrasonic Researches of Research Center of Neurology RAMS.

Address: 125367, Russia, Moscow, Volokolamskoe shosse, 80.
Phone number: +7 (495) 490-24-07. E-mail: vyitsik7@mail.ru

Zavalishin Igor Alekseevich, M. D. Med., Professor, Honored Worker of Science of the Russian Federation.

Address: 125367, Russia, Moscow, Volokolamskoe shosse, 80.
Phone number: +7 (495) 940-21-55. E-mail: center@neurology.ru

Akhmedzhanova Louise Talgatovna, Ph. D. Med., Associate Professor of the A. Y. Kozhevnikov Neurological Department of I. M. Sechenov First Moscow Medical State University, Ministry of Healthcare of Russia.

Address: 119021, Russia, Moscow, Rossolimo st., 11, p. 1.
Phone number: +7 (499) 248-63-00. E-mail: luiziana78@mail.ru

Strokov Igor Alekseevich, Ph. D. Med., Associate Professor of the A. Y. Kozhevnikov Neurological Department of I. M. Sechenov First Moscow Medical State University, Ministry of Healthcare of Russia.

Address: 119021, Russia, Moscow, Rossolimo st., 11, p. 1.
Phone number: +7 (499) 248-63-00. E-mail: strigoral@mail.ru