

**WCN19-2265**

Journal of the Neurological Sciences 405S (2019) 105484

**Poster Session 4****Effectiveness of the device for electrostimulation with bio-control “trenar-01” in the rehabilitation of patients with motor deficiency after cerebral stroke**

T. Chernyi, O. Lytvyn, O. Kuryk

*Scientific Department of Internal Medicine, State Institution of Science Research and Practical Centre of Preventive and Clinical Medicine State Administrative Department- Kyiv- Ukraine, Kyiv, Ukraine***Background**

The problem of rehabilitation of patients who have suffered a stroke is relevant at present. The great importance in the processes of rehabilitation after stroke have neuroplasticity of the brain. This approach is implemented in a new class of electronic devices TRENAR® for biologically adequate movements control that are developed at The International Research and Training Center for Information Technologies in Ukraine.

**The aim of the research**

evaluation of the functional capabilities of the software device TRENAR-01® in the restoration of arbitrary movements of patients with impaired central motor neuronal function due to acute cerebrovascular accidental ischemic or hemorrhagic origin.

**Material and method**

Clinical-neurological examination and treatment of 30 patients with cerebral stroke were conducted. 15 electrostimulation procedures were performed on the Trenar-01® machine.

**Results**

After the treatment in the group of patients with acute cerebrovascular accident (23 patients), there was no effect on regression of motor deficit in only one case, when the origin of acute cerebrovascular accident was cardioembolic (with the presence of contraindications for systemic thrombolysis), in patients with long-term consequences of transmitted acute cerebrovascular accident (7 patients) there was a positive dynamics in the reduction of motor deficit. Reliably proved ( $p < .005$ ) the effectiveness of training movements of the damaged limb according to the program, proceeding from arbitrary reductions of symmetrical healthy muscles in paralyzed patients.

**Conclusion**

The electrostimulation with bio-control “Trenar-01” is expedient in the early stages of rehabilitation in the absence of a cognitive disorder in the patient.

doi:10.1016/j.jns.2019.10.1823

**WCN19-2266**

Journal of the Neurological Sciences 405S (2019) 105485

**Poster Session 4****Neurophysiologic assessment of sensory denervation in chemotherapy induced polyneuropathy**B. Isak<sup>a</sup>, H. Tankisi<sup>b</sup>, K. Pugdahl<sup>b</sup>, L. Ventzel<sup>c</sup>, A. Nanna Brix Frederiksen<sup>c</sup>, A. Fuglsang-Frederiksen<sup>b</sup><sup>a</sup>*Department of Neurology, Marmara University Hospital, Istanbul, Turkey*<sup>b</sup>*Department of Clinical Neurophysiology, Aarhus University Hospital, Aarhus, Denmark*<sup>c</sup>*Department of Clinical Medicine, Danish Pain Research Centre, Aarhus, Denmark***Background**

In patients with suspicion of chemotherapy induced polyneuropathy (CI-PNP), demonstration of large- and small fiber sensory polyneuropathy (LFN and SFN, respectively) is essential to decide alteration or cessation of chemotherapy.

**Methods**

Thirty patients with complaints suggesting CI-PNP due to treatment with oxaliplatin or docetaxel were compared with 27 healthy subjects. All subjects were evaluated with nerve conduction studies (NCS), quantitative sensory testing (QST), laser evoked potentials (LEP). In addition, SFN in CI-PNP patients were assessed using cutaneous silent periods evoked with electrical (EI-CSP) and laser (Ls-CSP) stimuli.

**Results**

NCSs, QSTs, LEPs, Ls-CSPs, and EI-CSPs were abnormal in 27(90%), 28(93.3%), 16 (53.3%), 19 (63.3%), and 26 (86.6%) patients, respectively. EI-CSP durations recorded from hands were significantly longer and EI-CSP durations recorded from legs were significantly shorter than the controls. And, Ls-CSPs in hands were unavailable in 18 patients but available in all controls.

**Discussion**

NCS is the cornerstone to diagnose LFN. For SFN, LEPs showed moderate sensitivity. Unavailable Ls-CSP could be considered to confirm SFN in patients with suspicious LEPs (e.g., available but relatively small potentials). And, EI-CSPs can be considered to diagnose CI-PNP induced SFN in laboratories using conventional neurophysiologic equipment. QSTs are informative for both LFN and SFN but the process needed to interpret the data limits their utility in daily practice.

doi:10.1016/j.jns.2019.10.1824