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The effectiveness of NeySi 3M long-term Epidural Electrical Stimulation in patients with CRPS type 1

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Statement of the Problem: Chronic pain syndromes are a significant problem of society, which reduce the quality of life, social adaptation, has a negative impact on the psycho-emotional status of the patient. CRBS is no exception - it is one of the types of severe pain syndromes, which requires the choice of the optimal treatment type, which is not always an easy task. The purpose of this study is to evaluate the results of surgical treatment of patients with CRPS type 1 after implantation of systems for long-term epidural electrostimulation.

Methodology & Theoretical Orientation: The results of treatment of 19 patients with type 1 CRBS with the use of epidural electrical stimulation by implantation of NeySi 3M devices manufactured in Ukraine were analyzed. The age ranged from 27 to 56 years. Gender distribution: 12 females (63,2%), males – 7 (36,8%). CRPS of upper extremities were found in 10 patients (52,6%), CRPS of lower extremities – in 9 patients (47,4%). The level of implantation in case of involving upper limbs – C5-C7 epidurally, in case of CRPS of lower limbs – Th7-Th12 epidurally. The patients underwent all the necessary complex of clinical and neurological examination, including The Budapest criteria, VAS pain scale and additional instrumental research (EMG, ENMG, neuroimaging methods). The effectiveness of epidural stimulation was evaluated at 3, 6, and 12 months after surgery.

Findings: In terms of 6 months and later after surgery we got a significant results of pain relief in 16 (84,2%) of patients (from 8-10 of VAS to 1-3 of VAS) which means a noteworthy reduction of deep pain and allodynia.

Conclusion & Significance: Long-term epidural electrostimulation can be considered as an encouraging method of relieving patients of pain and improves the life quality in case of CRPS type 1 pathology.

Recent Publications

1. Gatskiy AA, Tretyak IB, Tretiakova AI, Tsymbaliuk YV. Choosing the target wisely: partial tibial nerve transfer to extensor digitorum motor branches with simultaneous posterior tibial tendon transfer. Could this be a way to improve functional outcome and gait biomechanics? J Neurosurg. 2019 Jun 7:1-9. doi:10.3171/2019.3.JNS182866. [Epub ahead of print] PubMed PMID: 31174188.
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