Efficacy of implementation of the FeSS protocol in thrombolysed stroke patients from Institute of Emergency Medicine

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Abstract

Background: Implementation of intravenous thrombolysis for acute ischemic stroke has significant impact on stroke outcome by reducing disability and post-stroke mortality rates. However, high risk for developing early complications persists. That's why, FeSS Protocol (additional screenings for blood glucose, temperature control and swallowing monitoring) has been implemented. The purpose of the study was to analyze the efficacy of the FeSS Protocol in reduction of complication rate after intravenous thrombolysis. We compared the data before and after its implementation.
Material and methods: Patients from Institute of Emergency Medicine who underwent thrombolytic treatment were included in this study. The rates of general and hemorrhagic complications were analyzed by comparing the period before (2015 – 2017) and after (2018 – 2020) implementation of the FeSS Protocol.
Results: According to the obtained data, in 2015 – 2017 period, 63 patients underwent the thrombolysis procedure, and in 2018 – 2020 – 124 patients. The rate of hemorrhagic complications in the first period was 11 (17.5%), 4 of which (6.3%) were fatal. In the second period there were 14 (11.2%) hemorrhagic complications, without any fatal cases. The percentage of general complications was higher in the first group – 32%, compared to 19.4% in the second group.
Conclusions: Hyperglycemia, fever and swallowing disturbances in the early post-stroke period are predisposing factors for the development of hemorrhagic and general complications, which negatively affect recovery after stroke. Tight monitoring and management of these parameters can improve the clinical and functional outcome of stroke patients.
Key words: stroke, FeSS, thrombolysis.

Co-occurrence of voltage-gated calcium channel and acetylcholine receptor antibodies: case report

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Abstract

Background: Voltage-gated calcium channels (VGCC) antibodies are generally associated with Lambert Eaton myasthenic syndrome (LEMS). Their coexistence with acetylcholine receptor (AchR) antibodies, which are specific for myasthenia gravis (MG), is extremely rare.
Material and methods: Analysis of one case of co-occurrence of VGCC antibodies and AchR antibodies.
Results: A 36-year-old female without myasthenic symptoms underwent thoracoscopic surgery after a coincidental diagnosis of thymoma (WHO type B2). Two years later she developed generalized muscle weakness (that improved slightly after exercise), dyspnea, diplopia, blepharoptosis, dysarthria and disphagia. Electrophysiological studies showed a 20% decrement. AchR antibodies were positive (32.1 nmol/l), anti-MuSK antibodies were negative while anti-type T VGCC antibodies were atypically positive (14.51 index). The patient received pyridostigmine, corticosteroids, plasmapheresis, but due to a lack of improvement, cyclophosphamide was considered. While undergoing treatment, she developed a myasthenic crisis most likely triggered by SARS-CoV-2 pneumonia. Repeated thoracic imaging also showed a novel massive cystic mediastinal growth. Surgical treatment was recommended and the hystopathological exam revealed an invasive recurrent thymoma associated with a cystic mass.
Conclusions: While up to 5% of patients with MG may test positive for VGCC antibodies, the clinical particularities of these patients have opened the debate whether LEMS and MG might overlap. Several other distinctive, but possibly interrelated features mark this case as unique, particularly the progression of the myasthenic crisis, the recurrence of thymoma and the associated cystic mass.
Key words: calcium channels, acetylcholine receptor, antibodies, myasthenia gravis, Lambert Eaton myasthenic syndrome.