

Alteration of the Motor Unit Potential (MUP) in Myasthenia Gravis (MG)

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Aim: The MUP in the MG are controversial and based on insufficient number of patients investigated. The series of investigations were carried out, in which detailed analysis of the MUP parameters in the MG patients was made and their alterations in respect to the muscles' functional state were studied. **Methods:** Electromyographic (EMG) investigations were carried out in 400 muscles of 104 patients with serious forms of MG. The abductor muscle of the fifth finger and other various muscles were investigated. The data obtained assessed the students t-criteria. **Results:** The MUPs of the MG patients are characterized with decreased mean duration of the potential and pronounced drop of the amplitude. High value of the polyphasic and spontaneous activity is not revealed. Manifestation of the spontaneous activity MG is concerned with denervation alterations, confirmed by: practical absence of the fibrillation potentials and the positive spiky waves in the patients with reversible damages of the neuromuscular transmission; higher manifestation of spontaneous activity in muscles, where an adequate dose of Neostigmine does not elevate the mean duration of the MUPs. **Conclusion:** All the above-mentioned indicate high diagnostic value of recording of the MUPs and spontaneous activity during MG. Both the Neostigmine test and the EMG investigations provide for the assessment of the depth of neuromuscular transmission infringement as well as for reversibility of the process in a separate muscle. Advantage of the method for investigation of MUPs and spontaneous activity of the motor units in the MG diagnostics has been determined in testing of any kind of muscle.