

CLINICAL SIGNIFICANCE OF RECTUS, HAMSTRING, AND ADDUCTOR TESTS IN SELECTING MINIMALLY INVASIVE SURGICAL (APONEUROTIC LENGTHENING) TREATMENT FOR KNEE FLEXION CONTRACTURES IN CHILDREN WITH CEREBRAL PALSY

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Relevance of the topic. In patients with cerebral palsy, knee flexion contractures are often the result of spasticity and tenogenic changes. For the correct diagnosis of these contractures and the selection of individual treatment tactics, especially when choosing a minimally invasive surgical method (aponeurotic lengthening), special clinical tests - rectus femoris, hamstring and adductor tests - are of great importance. The rectus femoris test is performed with the patient lying on his stomach, with the hip passively flexed, if the knee joint does not pass into passive flexion or the lumbar region is raised - this indicates the presence of tenogenic shortening of the rectus femoris.

As a result of observations, when the result of this test is positive, the recruitment activity on the electroneuromyography examination is higher than 85 μ V, the flexion angle is higher than 30°, and the Ashworth scale is ≥ 2 points, and this is considered a direct indication for the use of aponeurotic lengthening type of treatment in such patients. To perform the hamstring test, the patient is placed in a supine position, the thigh is raised to a right angle, and passive extension is determined in the knee joint. If extension is limited, the presence of a contracture in the hamstring muscles is confirmed. In this case, the electroneuromyography activity is also high, the pulse rate is slowed, and the tenogenic type of contracture predominates. To perform the adductor test, the patient is placed in a supine position, and an attempt is made to abduct the right thigh externally. If abduction is limited and the patient experiences pain, there is high spasticity and shortening of the adductor group muscles, and in these cases, additional surgical manipulations are required with the condition of adductor tenotomy or aponeurosis lengthening when choosing a surgical method of treatment. In our observations, this test was positive in patients with Ashworth ≥ 3 , and minimally invasive aponeurotic lengthening surgery was used as the main treatment method in them.

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Conclusion. These tests serve not only for diagnosis, but also as a criterion for choosing a minimally invasive surgical method. In cases where the test results coincided with the electroneuromyography and Ashworth scores, i.e., in children with a flexion angle of 34.5° and an electroneuromyography result of $90.2 \mu\text{V}$, after the surgery, the flexion angle improved to 11.4° and the electroneuromyography result to $75.2 \mu\text{V}$, indicating high treatment effectiveness. This indicates that the diagnostic and prognostic value of these tests in the process is high.

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