

PHYSIOTHERAPY EFFECT ON THE FUNCTIONAL STATUS OF CHILDREN WITH CEREBRAL PALSY AFTER SELECTIVE DORSAL RHIZOTOMY SURGERY

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Background and Aims

The study has shown the importance of selecting patients according to functional status for surgical treatment and the importance of assessing functional status indicators when planning a rehabilitation program for children after selective dorsal rhizotomy, the aims were to evaluate the effect of physiotherapy on the functional status of children with cerebral palsy after selective dorsal rhizotomy surgery.

Methods

VAS scale for pain level assessment, goniometry, Ashworth scale for muscle tone assessment, manual muscle strength testing according to the Lovett scale, Tinetti test for balance and gait assessment, modified FIM scale for mobility assessment.

Results

A statistically significant change in the following functional status indicators was found after physiotherapy: pain level, range of motion, lower limb muscle tone, balance and gait, and mobility ($p < 0.05$). Mobility showed the most significant change. When comparing the differences in indicators between the GMFCS classification system levels, muscle tone before physiotherapy differed statistically significantly, while mobility and balance differed statistically significantly after physiotherapy. It was found that the results of Level II patients improved the most after physiotherapy, and those of Level IV patients improved the least.

Conclusion

Statistically significant ($p < 0.05$) improvements were observed in the following functional status indicators in children with cerebral palsy after selective dorsal rhizotomy surgery: pain level, range of motion, muscle tone, balance and gait, and mobility. Muscle strength increased statistically significantly only in separate muscle groups. When assessing and comparing the differences in functional status indicators before and after physiotherapy, a statistically significant difference was found in mobility function between Level II and Level III, and between Level II and Level IV, and in balance function between Level II and Level IV ($p < 0.05$). The greatest statistically significant improvement in indicators after physiotherapy was found in Level II according to the GMFCS classification system, and the smallest improvement was found in Level IV.

Keywords: Cerebral palsy, selective dorsal rhizotomy