

REINTEGRATION OF NORMAL DEVELOPMENTAL MOTOR PATTERNS IN THE POST SELECTIVE DORSAL RHIZOTOMY PEDIATRIC POPULATION: A CASE REPORT

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Compliance Statement

Subjects signed a consent form. Subject data was kept confidential.

BACKGROUND AND PURPOSE: Cerebral Palsy (CP) occurs in nearly 4 per 1,000 live births, and is the most common cause of motor disability in children. Characterized by permanent deficits of movement development and posture, it causes activity limitations. Spastic CP constitutes 80% of children with CP. Symptoms include muscle weakness, joint contractures, abnormal gait patterns, and joint tightness. Spasticity is a condition where abnormal increases in muscle tone may interfere with movement. Selective dorsal rhizotomy (SDR) has become a common surgical intervention for patients with CP. Abnormal movement patterns may persist after surgery, thus facilitating well-coordinated movement patterns through intensive physical therapy is required for return of function. Current literature does not outline specific functional exercises used to help achieve this goal. The purpose of this case report is to describe the measures used to reintegrate normal movement patterns for a child with spastic CP post a selective dorsal rhizotomy.

CASE DESCRIPTION: The patient was a 6 year old male with a medical diagnosis of spastic CP referred to physical therapy for a post SDR examination. Upon examination, deficits in range of motion, spasticity, isolated motor control, functional posture, and performance of transfers were noted. During 20 therapy sessions, focused interventions were used to facilitate specific developmental positions and reintegrate normal movement patterns.

OUTCOMES: Improvements were observed in all outcome measures: motor portion of WeeFIM, spasticity measured by the Modified Ashworth Scale, isolated motor control, and functional improvements measured by subjective measures. Results indicated an increase in balance, strength, and functional ability.

DISCUSSION: Despite the lack of evidence administering a specific functional program for the rehabilitation of a patient post SDR, findings of this case report suggest reintegrating normal progression of movement patterns may contribute to improvements in balance, strength, and functional ability in pediatric patients with spastic cerebral palsy.