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BACKGROUND AND PURPOSE:
Cerebellar insults can drastically impact the ability to perform motor tasks. If the cerebellum is compromised through injury or disease, deficits relating to posture and movement such as ataxia, dysmetria, decreased muscle tone, decreased balance, and poor postural control will occur. Traditional interventions to improve postural control resulting from cerebellar damage include strengthening of proximal musculature with emphasis on the ability to isometrically hold dynamic postures, balance training on stable and unstable surfaces, coordination activities, functional mobility, and the use of external devices and garments. TheraTogs are one such garment reported to positively influence body awareness, posture, balance, gait, and motor performance. They are comprised of a suit and strapping system intended to apply prolonged gentle force and proprioceptive input impacting muscle recruitment strategies and mimicking muscle actions to facilitate alignment and stability.

AtaxiTogs are a form of TheraTogs designed to address deficits from cerebellar dysfunction without musculoskeletal issues. Although all forms of TheraTogs are widely recommended for use by clinicians, it appears that support for TheraTogs is based on subjective reports and observation of improvement rather than on research. Research that supports the effectiveness of TheraTogs is limited with no published research regarding the effectiveness of AtaxiTogs on balance, postural control, and ataxia in any patient population. The purpose of this case report is to describe the use of AtaxiTogs as an adjunct intervention for a patient post cerebellar injury demonstrating decreased postural control over 5 weeks.

CASE DESCRIPTION:
A 13-year-old Guatemalan female found to have multiple cerebellar AVM’s. The patient underwent multiple aneurysm resections with resection of 1/3 of the right parietal lobe. She presented to physical therapy at 14 years of age with poor grade and eccentric control of movement, medical or surgical history and was reported to be a healthy and active girl. The patient continued to experience difficulty within all functional tasks.

OUTCOMES:
Prior to commencing AtaxiTog intervention, objective measures including the Pediatric Evaluation of Disability (PEDI), the Trunk Impairment Scale (TIS), and the KINDL® Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents were administered to the patient. After 5 weeks of traditional intervention along with AtaxiTogs, substantial improvements were noted in all of the above objective measures with and without the AtaxiTogs donned, demonstrating increased functional capabilities, strength and control of movement, and increased perceptions of quality of life and confidence. Although the patient demonstrated the positive influence of AtaxiTogs on the overall quality of and perception of patient movements.

DISCUSSION:
The purpose of this case report was to describe the use of AtaxiTogs as an adjunct intervention for a patient post cerebellar injury demonstrating decreased postural control over 5 weeks. The patient demonstrated characteristic deficits associated with cerebellar dysfunction with major limitations in postural control, balance, coordination, ataxia and dysmetria. The patient’s performance on objective tests post intervention demonstrated considerable clinical and functional improvements. It remains unclear whether traditional treatment, AtaxiTogs, or a combination of both influenced patient performance. Additionally, natural healing cannot be discounted as a contributor to overall improvements. Subjective findings of increased steadiness and decreased ataxia, as well as increased confidence when using the AtaxiTogs demonstrated the positive influence of AtaxiTogs on the overall quality of and perception of patient movements.

REFERENCES:

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