

Will Lower Extremity Strengthening Be Beneficial for Ambulation in Patients with Guillain-Barré Syndrome? A Case Study

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INTRODUCTION

Guillain-Barré is an immune-mediated response that triggers destruction of the myelin sheath covering the peripheral nerves. The demyelination occurs between the nodes of Ranvier, blocking the transmission of impulses from node to node. Typically, the axons are spared, but recovery occurs slowly as the remyelination takes place. It is more common in older persons, but can occur at a relatively young age, 30-50 years old. Recovery will typically begin after the acute/subacute and plateau phase with gradual resolution of the paralysis lasting 1-2 years. It has been noted that an increase in muscle strength will usually occur in the first 6 months of recovery, but continued, significant progress can be observed beyond 12 months. However, the ongoing impact of Guillain-Barré Syndrome on activities of daily living, work, social activities and health-related quality of life can be considerable. With minimal literature on the benefits of skilled physical therapy intervention concerning muscle strength in ambulation in patients with Guillain-Barré Syndrome, the aim of this case report was to determine if lower extremity strengthening would be beneficial for ambulation in patients with Guillain-Barré Syndrome.

METHODS

The patient received skilled physical therapy intervention with a home health agency 2 times each week for 8 weeks. His therapy consisted of, but was not limited to, active range of motion, stretching, bilateral lower extremity strengthening, gait, balance, and transfer training.

FINDINGS

This patient was not discharged from home health physical therapy because he still demonstrated a need for skilled care. However, at the time of his reassessment he had achieved all of his goals except for transferring with supervision utilizing an assistive device and increasing his Tinetti score to 19/28 or greater. He scored an 11/28 still classifying him as a high risk of falls, but a significant increase from his initial evaluation score of 0/28. His goals were adjusted to an advanced program. He will continue to receive skilled home health physical therapy for gait, transfer, and balance training.

CONCLUSION

Guillain-Barré Syndrome is a multifaceted diagnosis and when this patient population is on the road to recovery there is little evidence that provides a formal exercise program to follow that would improve their functional capacities. However, implementing a lower extremity strengthening program in a home health setting is beneficial for ambulation in patients with Guillain-Barré Syndrome, but further research needs to be conducted in all aspects of rehabilitation as well as different stages of Guillain-Barré Syndrome in order to gain a firmer grasp on how to ideally treat these patients with physical therapy interventions.