E-Poster

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Optimizing Functional Outcomes in Advanced Lower Limb Spasticity in Multiple Sclerosis Using Combination of Botulinum Toxin Therapy and Physiotherapy: A Case Report

Topic: Complications/Sequelae (ie Spasticity, Immobilization and Frailty)

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BACKGROUND

''Lower limb spasticity is a debilitation condition resulting from neurological disorders, leading to impaired mobility and functional limitations. Botulinum toxin type A (BoNT-A) combined with physiotherapy has shown promise in managing spasticity, yet its impact in advanced cases remains less well-documented. This report highlights a patient who achieved significant functional improvement following BoNT-A injections and tailored physiotherapy'

CASE DESCRIPTION

'A 66-year-old female with a history of multiple sclerosis diagnosed in 2004 but became bed bound in the last eight years due to severe lower limb spasticity affecting sitting, mobility and quality of life. She was unable to achieve any sitting due to limitations in her ability to use the hoist caused by restricted knee movement. The modified Ashworth scale was 4 with functional limitations in sitting out as both knees were fixed in extension with associated pain Grade of 10/10 using the visual analog scale.

She was then referred to a rehabilitation medicine specialist for a joint home assessment with the treating physiotherapist and then underwent BoNT-A injections targeting bilateral quadriceps muscles followed by a structured intensive rehabilitation program one week after including strengthening, stretches and educating the carers on how to carry out a passive lower limb mobility exercises which they did judiciously for six days a week, this physical therapy intervention consisted of 20-30 minutes sessions daily for sixweeks. After six weeks her passive knee flexion improved bilaterally to 45 degrees with reduction in pain (VAS 2/10) with improvement in modified Ashworth scale to Grade 3. She was successfully hoisted to tilt in space shower chair and could now take a shower twice a week, able to sit with regular practice on the shower chair comfortably. She was subsequently assessed for wheel chair.

DISCUSSION

Spasticity affects up to 90% of individuals with multiple sclerosis (MS) and is the leading cause of functional impairment. While mild cases may be managed with first line interventions like oral antispasmodics, advanced cases often require more intensive, multi modal treatment due to persistent symptoms and reduced efficacy of standard therapies as physical therapy alone might not fully address severe spasticity.

CONCLUSION

This case highlights the synergistic benefits of combining BoNT-A therapy with physiotherapy in managing advanced lower limb spasticity, importance of multimodal collaboration(eg neurologists, physiatrist, physical therapist) in managing MS-related spasticity. Further research or strategies is needed to improve care delivery for advanced spasticity.

Statement of Disclosures

None

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