Occupational Therapy’s Role in Treatment of Patients with Guillain Barre Syndrome

What is Guillain Barre Syndrome (GBS)?
GBS is a disorder in which the body's immune system mistakenly attacks part of its peripheral nervous system. GBS is characterized by progressive symmetric ascending muscle weakness, paralysis, and hyperflexion with or without sensory or autonomic symptoms.

Cause: The cause of GBS is unknown but has been associated with bacterial and viral infections, administration of certain vaccinations and medications, and other associations/triggers such as systemic illnesses.

Clinical Features
The first symptoms are typically progressive muscle weakness, fatigue, and sensory changes including paresthesias and dysesthesias that that occur suddenly or gradually over several hours to several months. The mean time to improvement and clinical recovery are 28 days to 200 days. Most individuals with GBS recover, although some continue to have some degree of weakness.

Evaluation includes assessment and documentation of muscle strength/motor control; sensation/pain, respiratory status, cardiac status/endurance, range of motion, orofacial status, swallowing function, ADL status, bowel and bladder function, and psychosocial status.

Occupational Therapy & GBS
Due to the loss of function in various anatomical structures the body cannot possibly function in a normal pattern. GBS makes performance in areas of occupation difficult if not impossible. Specifically, dressing, eating, grooming, work, play, leisure, education, and social participation are affected areas of occupation under the Occupational Therapy Practice Framework. When working with patients with GBS muscle strengthening and relearning how to move and use the body should be focused upon. Through strengthening of the weakened muscles, dressing, grooming, eating, and many other areas of occupations will be improved. Range of motion should also be focused upon in the therapeutic setting with GBS clients, especially if the client has been bedridden for a long period of time. Various stretches, weight lifting, resistance bands, and activities that incorporate each of these would be great options for therapeutic interventions (Ryan & Sladyk, 2005).

Acute and Post-Acute Phase of Rehab
1. Obtain/maintain functional range of motion
2. Protect weak and tender muscles
3. Obtain/maintain functional respiratory status
4. Obtain functional facial and swallowing control

Rehabilitation Phase
1. Increase muscle strength and endurance
   a. Occupational Therapists (OTs) can get creative—it’s not all about a cycle ergometer!
2. Improve ADL function
3. Improve mobility and transfers
4. Assess for appropriate mobility aids, adaptive equipment and splints
   a. i.e. OTs can identify a need for items including an adaptive bath chair to assist with posture during bathing exercises, light weight to progressive heavier weighted eating utensils as the individual develops additional strength
Post Discharge Phase
1. Increase endurance
2. Improve hand strength and fine motor skills
3. Adjust to home and community

Restrictions
When muscle belly tenderness is present, activities are restricted to prevent stretch and fatigue of weak and tender muscles. Patient should not move actively and log rolling protects paraspinals from stretch when changing positions. As muscle belly tenderness decreases, ROM progresses from passive to active assistive. When muscle belly tenderness resolves, rolling activities may begin.

Ensuring an Optimal OT POC
Consider the following when formulating an OT POC to assist in ensuring the individual has the best chance at recovery:
1. Avoid too heavy of weights or too much resistance too early on in the POC
2. Avoid working the muscles to absolute failure
3. Avoid activities that would be considered strenuous exercise too early in the plan of care
4. Allow for adequate rest periods between and after exercises and activities
5. Set-up a plan that works on different muscle groups throughout treatment to avoid fatigue

Outcome Measures
• Modified Barthel Index
• Functional Measures (CMS Quality Indicators Section GG)
• Environmental Status Scale
• Handicapped Assessment Scale

References