Background

• 795,000 people in USA have a new or recurrent stroke each year, leaving them with spatiotemporal gait abnormalities. Following D/C from in-patient rehab, many patients continue to experience activity limitations & participation restrictions secondary to limited walking ability.

• The use of BWSTT & overground GT has been shown to improve bilateral coordination and gait symmetry for patients with chronic stroke.

• Evidence for BWSTT rather than overground GT is mixed and does not include representation for the young stroke population.

Purpose

• To describe the outcomes of gait speed, efficiency of gait, and fall risk in a young individual following a chronic stroke managed with intense BWSTT and overground GT

Case Description

• 44 y/o veteran.

• Right hemorrhagic CVA due to malignant hypertension four months prior to intervention (considered chronic).

• Patient presentation: left hemiparesis, spasticity of left upper and lower extremities, decreased sensation on the left, decreased gait speed, functional strength, and range of motion (ROM), impaired balance in bilateral stance, visual field deficits, & flat affect.

• RH was considered a severe fall risk.

• BWSTT and GT 5x/week for 12 weeks.

Interventions

• Intervention progression was based on patient tolerance and included increased duration, intensity, frequency, and decreased rest breaks.

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<tr>
<th>Week 1</th>
<th>Week 4</th>
<th>Week 6</th>
<th>Week 9</th>
<th>Week 12</th>
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<tbody>
<tr>
<td>BWSTT</td>
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<tr>
<td>10% BW; 2 sets of 5'; @ 0.6-0.8 MPH; 60% BWS; 3 sets of 5'; @ 1.1-1.3 MPH</td>
<td>40% BW; 3 sets of 10'; @ 1.3-1.5 MPH; 75% BW; 3 sets of 5'; @ 1.5-1.7 MPH; 15% BW; 2 sets of 5'; @ 1.5-1.6 MPH</td>
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<td>GT</td>
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<tr>
<td>No AD; with CGA; Walks @ 2 MPH for balance &amp; safety, self-selected pace</td>
<td>No AD; with CGA; Walks @ 2 MPH for balance &amp; safety, increased speed</td>
<td>No AD; with CGA; Walks @ 2 MPH for balance &amp; safety, increased speed</td>
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<td>OAT</td>
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<td>Fits, skin checks, and ambulation with traditional AFO</td>
<td>Bioness L300 cuff with proportional interventions</td>
<td>Static balance; UE functional strengthening</td>
<td>Independent with FES device</td>
<td>Static &amp; dynamic balance; perturbation exercises; obstacle courses</td>
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Outcomes

• Tests and measures were performed at baseline and discharge to obtain objective measures of RH’s progress.

• At D/C, RH met 1/4 of the PT goals for D/C planning.

• However, RH met his self-reported goals of: walking without the use of an AD, improved balance, and no reported falls.

References


