Physical Therapy Management of a Patient with a Lacunar Stroke and Multiple Comorbidities: A Case Report

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Background

- Strokes are the fourth leading cause of death and the number one cause of long-term disability in the United States
- A lacunar infarct is a type of ischemic stroke that occurs within the deepest structures of the brain when one of the small arteries gets blocked
- Risk factors for a lacunar stroke include older age, high blood pressure, smoking, excessive alcohol consumption, poor diet, and obstructive sleep apnea

Examination

<table>
<thead>
<tr>
<th>Tests &amp; Measures</th>
<th>Initial Evaluation</th>
<th>Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rolling</td>
<td>ModA of 2</td>
<td>Independent</td>
</tr>
<tr>
<td>Supine to Sit/Sit to Supine</td>
<td>ModA of 2</td>
<td>Independent</td>
</tr>
<tr>
<td>Sit to Stand</td>
<td>ModA of 1</td>
<td>SBA</td>
</tr>
<tr>
<td>Stand Pivot Transfer</td>
<td>ModA of 2</td>
<td>SBA</td>
</tr>
<tr>
<td>Wheelchair Mobility</td>
<td>60 ft. with supervision using L LE and L UE</td>
<td>&gt; 250 ft. independently using B LE and/or B UE</td>
</tr>
</tbody>
</table>

PT Diagnosis

- Other abnormalities of gait and mobility

Impairments

1. Right-sided hemiparesis
2. Right-sided neglect
3. Right facial weakness
4. Dysarthria
5. Dysphagia
6. Impaired strength
7. Impaired balance
8. Impaired coordination

Limitations

1. Bed mobility
2. Transfers
3. Gait
4. Wheelchair mobility
5. ADLs

Patient's Goals

1. Regain functional mobility
2. Return home
3. Independent with ADLs

Prognosis

- Improvement with PT was considered good

Outcomes

- After seven weeks, the patient improved her sitting and standing balance, LE strength, activity tolerance, bed mobility, transfers, and gait
- Progressed from ambulating with the use of a right platform walker and Mod A of 1 to ambulating with the use of a straight cane and Mod A of 1-CGA

Future research should attempt to determine the most effective interventions for patients with a lacunar infarct who also have multiple comorbidities

Interventions

- Seated LE strengthening
- Standing LE strengthening
- Nu-Step
- Bed mobility
- Transfer training
- Patient education
- Dynamic sitting balance
- Static standing balance
- Overground gait training
- Community ambulation
- Stair training

References


Acknowledgements

The author acknowledges Michael Fillyaw, PT for his assistance in editing this case report and Gregg Powers, PT for supervising and assisting the patient's treatment.

Discussion

- The PT interventions utilized in the plan of care improved the patient's functional mobility and allowed her to return home under the care of her son
- The patient’s comorbidities likely contributed to a plateau in progress
- The interventions used were not specific to a lacunar stroke which may have impacted progress
- Future research should attempt to determine the most effective interventions for patients with a lacunar infarct who also have multiple comorbidities

Case Description

- 70 y/o female
- Acute lacunar left internal capsule infarct
- PT services 60-75 minutes a day for six days a week

Purpose

- To describe the plan of care for a patient with a lacunar infarct and multiple comorbidities in a long-term care facility with the goal of helping the patient achieve independent functional mobility so that she can return home.

Comorbidities

- Type II Diabetes
- Chronic Hypoxia
- Pituitary Adenoma
- E. coli UTI
- Obesity
- Asthma
- GERD
- Anxiety

Acne

Gait Training

- Overground gait training
- Community ambulation
- Stair training