

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

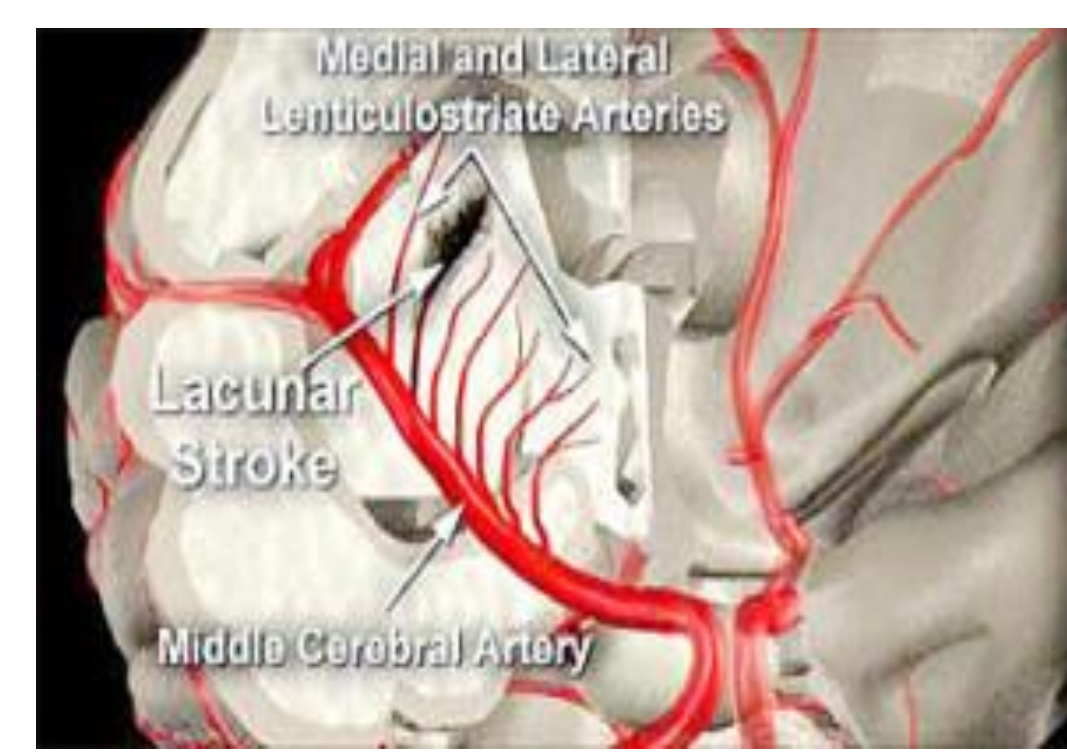
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Background

- Strokes are the fourth leading cause of death and the number one cause of long-term disability in the United States¹
- 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 blocked¹
- Risk factors for a lacunar stroke include older age, high blood pressure, smoking, excessive alcohol consumption, poor diet, and obstructive sleep apnea²



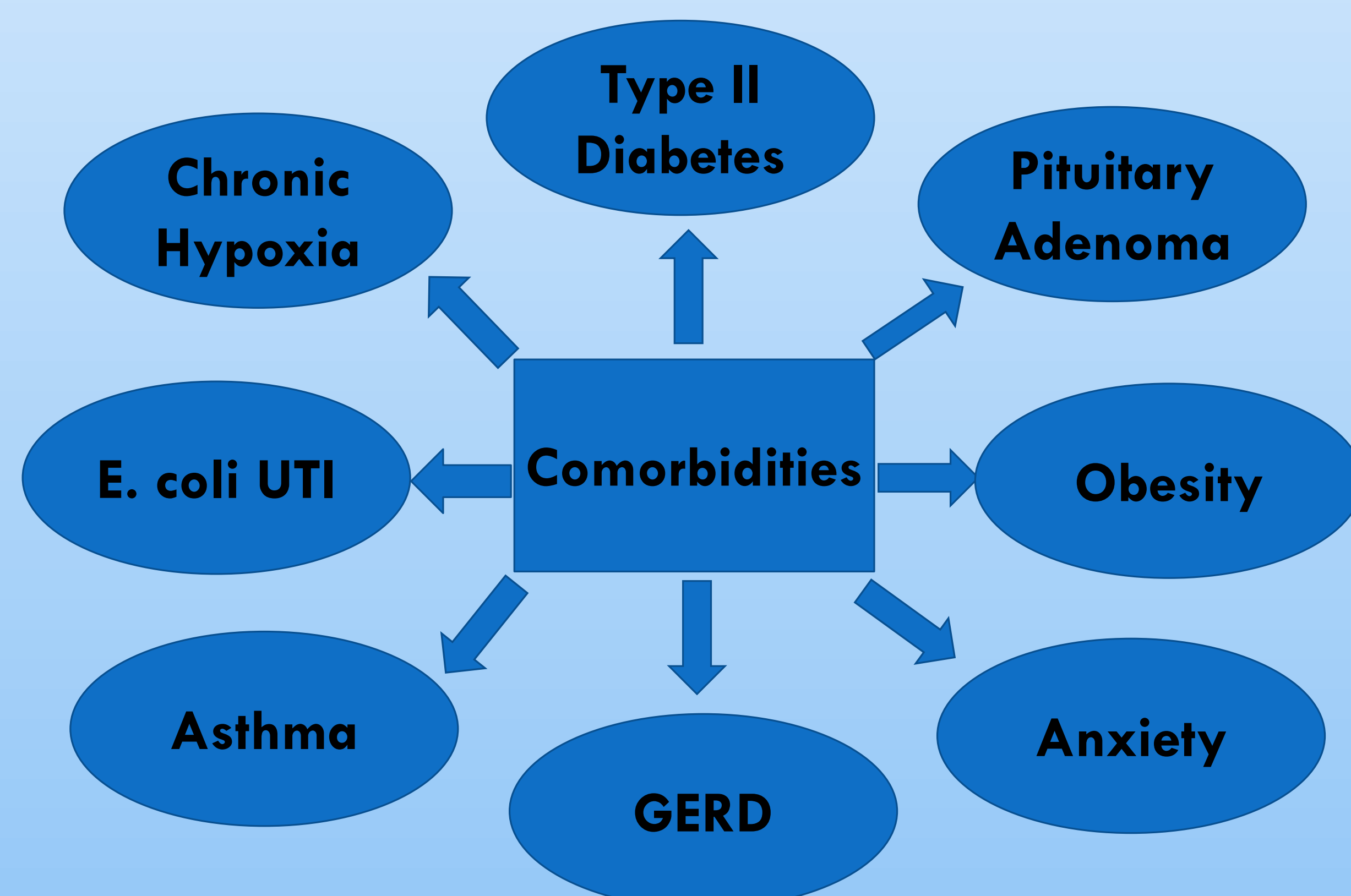
Depiction of a Lacunar Stroke. Pictures from Google Images

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.

Case Description

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



Examination

Tests & Measures	Initial Evaluation	Discharge
Rolling	ModA of 2	Independent
Supine to Sit/Sit to Supine	ModA of 2	Independent
Sit to Stand	ModA of 1	SBA
Stand Pivot Transfer	ModA of 2	SBA
Wheelchair Mobility	60 ft. with supervision using L LE and L UE	> 250 ft. independently using B LE and/or B UE
Gait	Unsteady gait with a step-to pattern and ModA of 2. Distance walked: 60 ft. with L UE support using parallel bars and R UE supported by the therapist. A second therapist provided Mod A from behind.	Reciprocal gait pattern using a straight cane with her left hand and ModA of 1-CGA Distance walked: > 250 ft. both indoors and outdoors

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

Interventions



Therapeutic Exercise

- Seated LE strengthening
- Standing LE strengthening
- Nu-Step



Therapeutic Activities

- Bed mobility
- Transfer training
- Patient education



Neuromuscular Re-Education

- Dynamic sitting balance
- Static standing balance



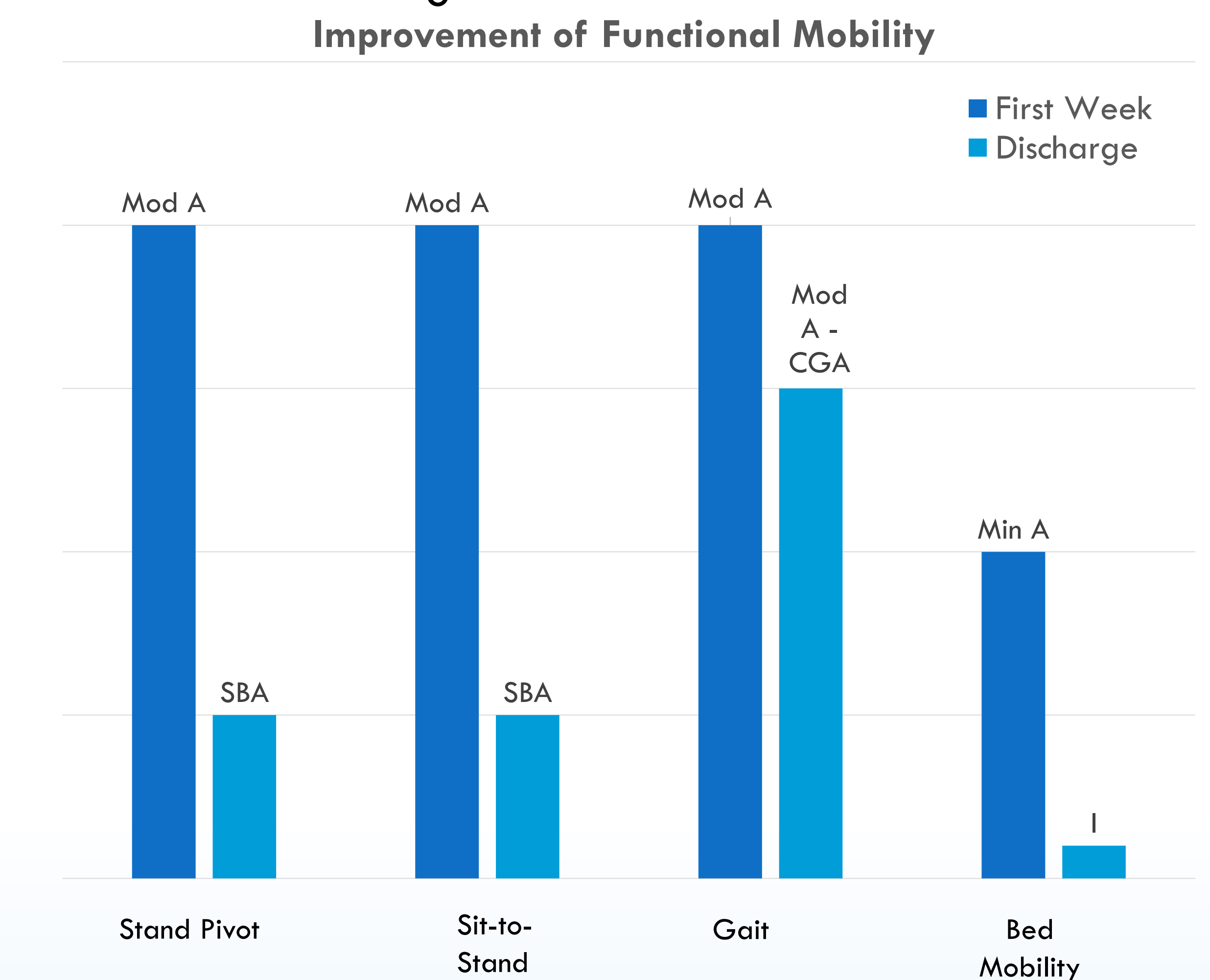
Gait Training

- Overground gait training
- Community ambulation
- Stair training

Pictures from Google Images

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



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

References

1. O'Sullivan S. Chapter 15: Stroke. In: O'Sullivan S, Schmitz T, Fulk G. *Physical Rehabilitation*. 6th ed. Philadelphia, PA: F.A. Davis Company; 2014: 645-707.
2. Lacunar Infarct: A Type of Stroke. Bel Marra Health website. <http://www.belmarrahealth.com/lacunar-infarct-type-stroke-causes-symptoms-treatment-options/>. Accessed July 15, 2017.

Acknowledgements

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