

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

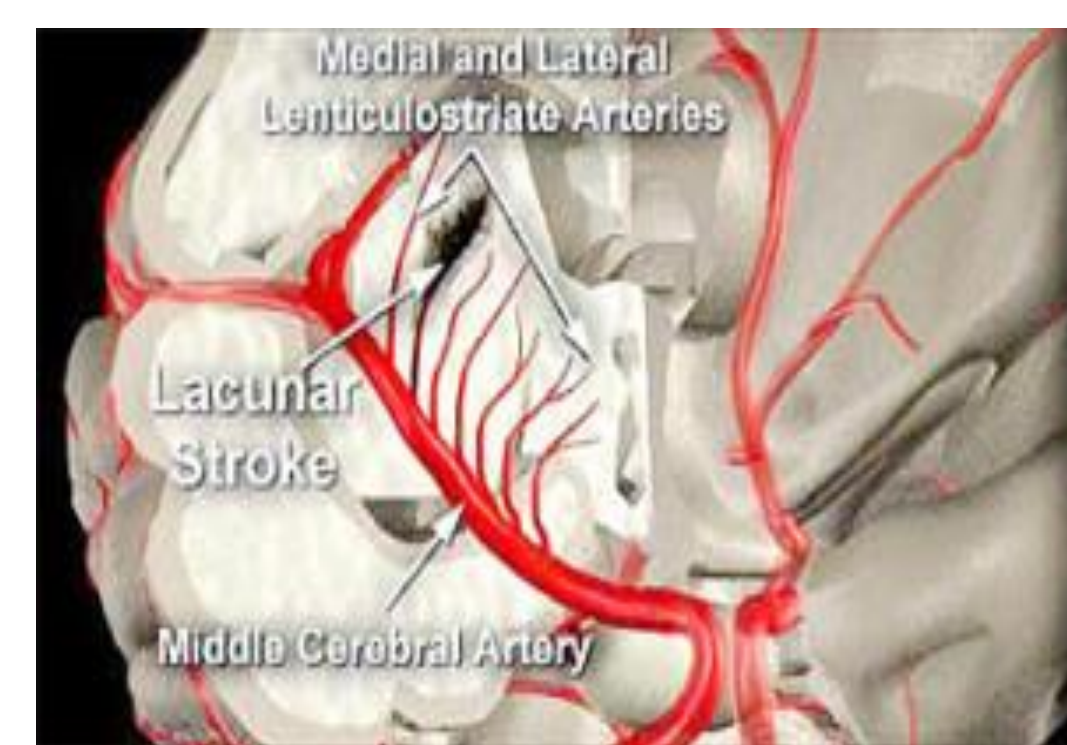
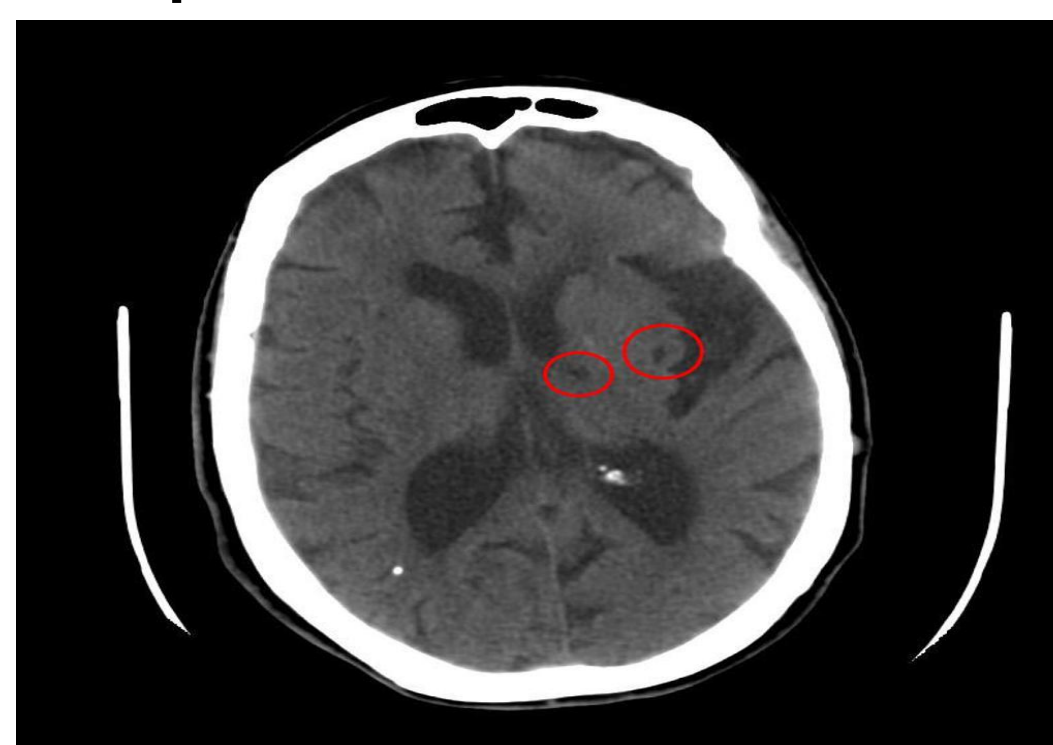
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Background

- 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



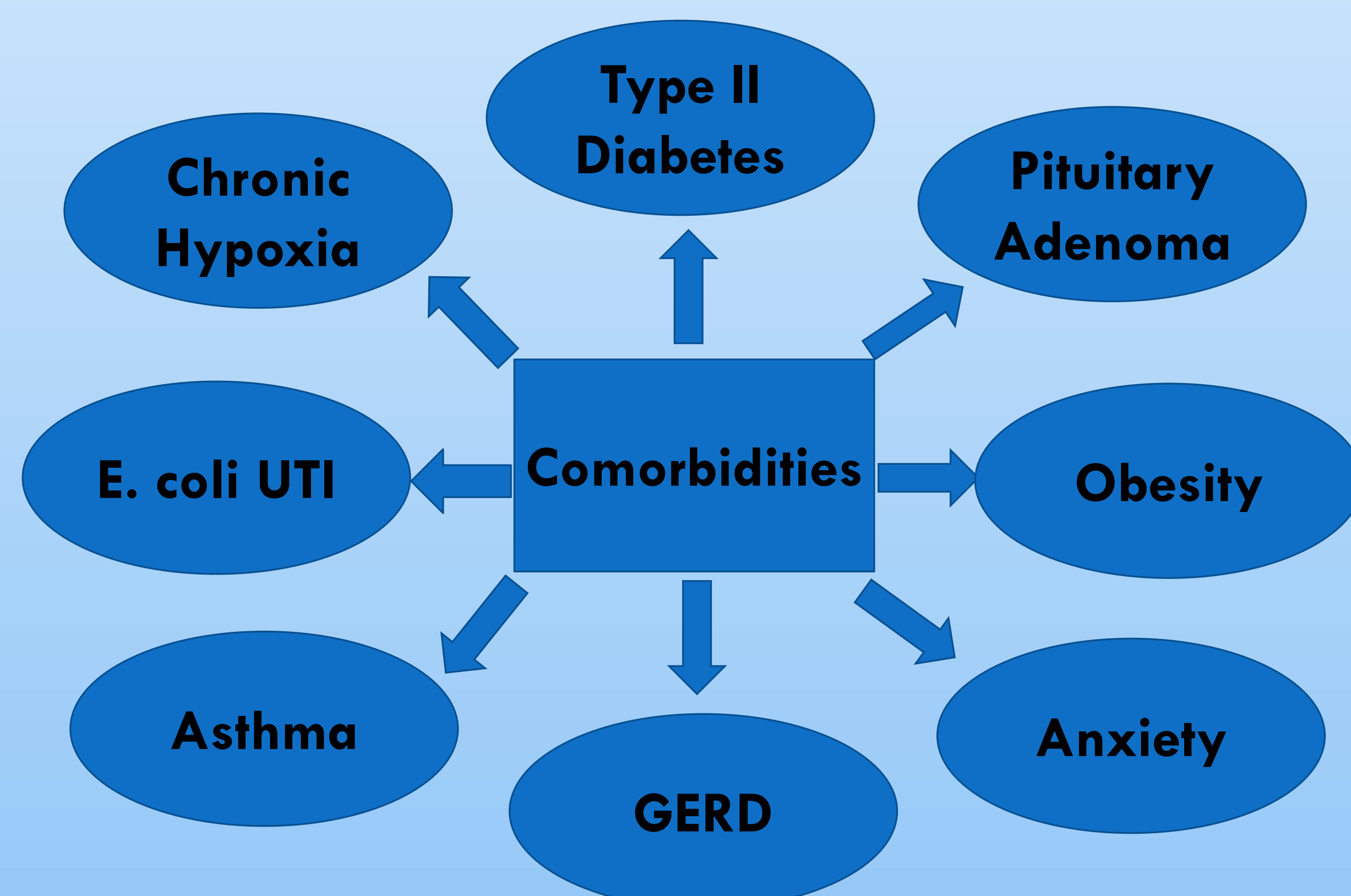
Depiction of a Lacunar Stroke. Pictures from Google Images

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

- Right-sided hemiparesis
- Right-sided neglect
- Right facial weakness
- Dysarthria
- Dysphagia
- Impaired strength
- Impaired balance
- Impaired coordination

Limitations

- Bed mobility
- Transfers
- Gait
- Wheelchair mobility
- ADLs

Patient's Goals

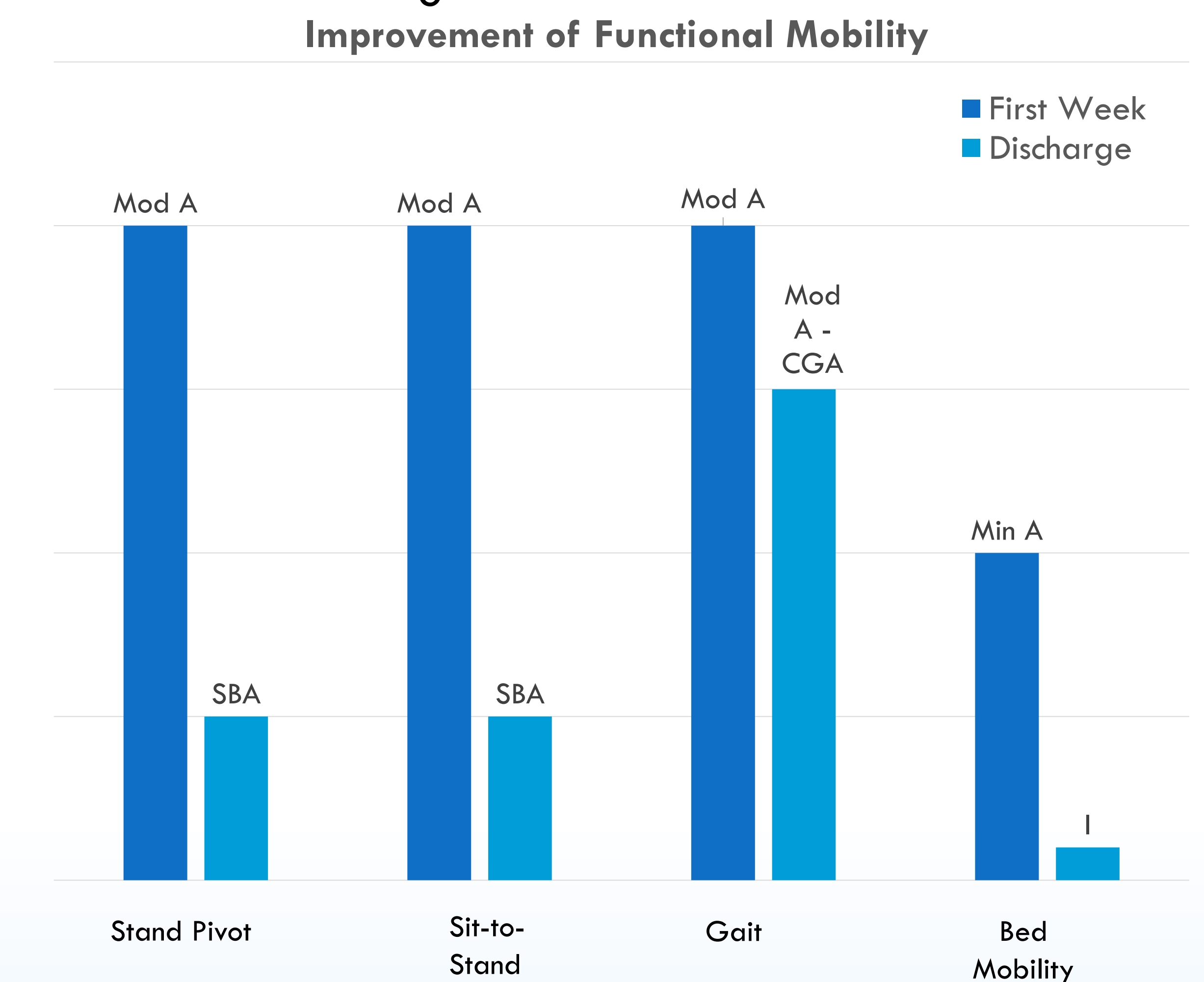
- Regain functional mobility
- Return home
- Independent with ADLs

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



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

- 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.
- 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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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