Physical Therapy Management Of A Patient After Hemorrhagic Stroke Using A Task-Oriented Approach In A Skilled Nursing Facility: A Case Report

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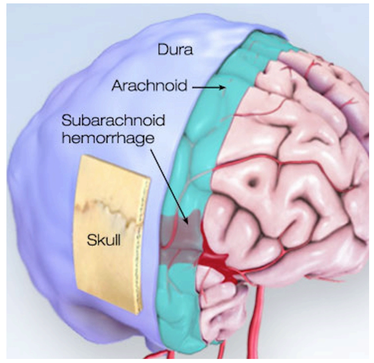
Unique

- Stroke is the leading cause of long term disability in the U.S.
- Nearly 800,000 Americans have a stroke each year.[1]
- Subarachnoid hemorrhagic stroke occurs when one of the blood vessels in the brain bursts causing a release of blood which increases intracranial pressure.[1]
- There is a lack of rehabilitation research in the skilled nursing setting for hemorrhagic stroke.



http://watchlearnlive.heart.org/CVML_Player.php?moduleSelect=hemstr

Purpose

To describe the PT management, using a task-oriented approach, of a patient with a subarachnoid hemorrhagic stroke being treated in a skilled nursing setting.

Foundation

- Research has been done on ambulatory patients with chronic stroke in an outpatient setting[2] using body weight supported and robotic systems for gait training.
- While both of these interventions have been shown to be effective,[3,4] neither of these systems were available in the skilled nursing facility.
- Even without these systems, it has been found that patients who receive inpatient stroke rehabilitation demonstrate improved motor recovery, functional status, and quality of life at discharge.[2]
- This report details using a task-oriented approach[5] to promote functional mobility and independence in a patient with a hemorrhagic stroke.

Case Description

- 55-year-old female with a diagnosis of subarachnoid hemorrhage.
- In the hospital the patient underwent a decompressive hemicraniectomy of the right side of the skull with a skin flap.
- This surgical procedure involves removing a portion of the skull and cutting through the dura mater underneath to allow the swollen brain tissue to expand without damage to other brain structures.[6]
- After 25 days in the hospital, she was transferred to a skilled nursing facility.
- Initial PT examination found left hemiparesis and pusher syndrome.
- The patient wore a helmet during all out of bed activities.
- She had PT 6 days/week for ~50 minute sessions, over 13 weeks.
- The patient's goals were to walk again and to return home without full time home health services.

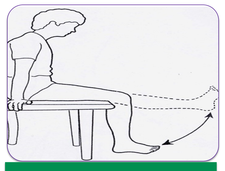
Functional Mobility	Admission	Re-evaluation
Bed Mobility	Maximum Assistance and Verbal Cues	Modified Independent
Rolling	Maximum Assistance	Modified Independent
Supine to Sit	Dependent	Modified Independent
Sit to Supine	Dependent	Modified Independent
Sitting EOB	Modified Assistance	Modified Independent
Stand Pivot	Not Tested	Minimum Assistance
Sit to Stand	Not Tested	Contact Guard
Stand to Sit	Not Tested	Contact Guard
W/C mobility	Not Tested	Supervision
Gait	Not Tested	Minimum Assistance
CARE Items Mobility Assessment Score	15/84	41/84

http://www.alimed.com/aircast-airsport-ankle-brace.html

Wheelchair Mobility:
-decrease distance
-decrease therapist assistance

Gait Training
-parallel bars
-Progressed to hemi-walker
-utilized ankle brace

Neuro-muscular Re-education
-balance
-weight shifting
-hip/knee control



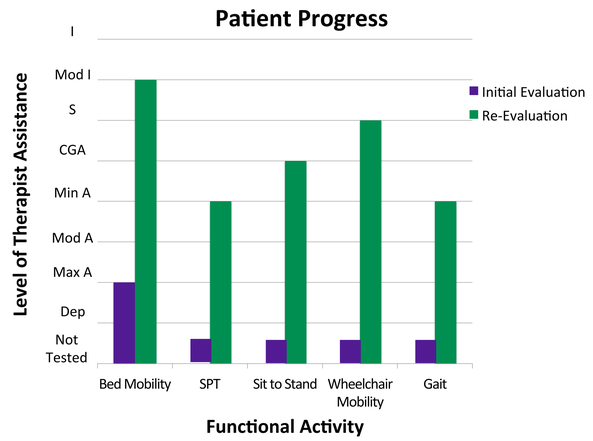
Exercises:
-LE seated and supine
-Cervical AROM
-Cervical Stretching

Bed Mobility
-Rolling
-Bridging
-Scooting
-Supine ↔ sit

Pre-Transfer/ Transfer Training
-Sitting EOB
-Lateral scoot/SPT
-Sit ↔ Stand

Observations

- At 13 weeks the patient improved all functional mobility.
- Her right lower extremity strength improved to a 5/5
- Her trunk strength increased from a 2+/5 to a 4-/5.
- Her CARE assessment[7] score increased to a 41/84.



Conclusions

Subarachnoid hemorrhagic stroke can cause severe functional deficits, however, a task-oriented treatment approach in a skilled nursing facility appears to have helped a 55-year-old female regain functional mobility skills to improve her quality of life. Research on the PT management of a patient with a subarachnoid hemorrhagic stroke in this setting should occur to determine if similar gains could be made in patients of other ages and gender.

Acknowledgments

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