Hip muscle strengthening and balance for a patient with Bipolar Disorder following hip fracture: A Case Report
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Introduction

• Hip fractures result in more than $258,000 hospital admissions annually for those aged 65 and older.
• Mortality rate following hip fracture is 10-20%.
• Among survivors, half will have longstanding disability, only 1/3 will return home, and 19-27% will remain in long term care.
• Six percent will experience a second fracture within four years.
• Cost for treatment for hip fractures in the US: $10.3-15.2 billion/year
• Over 95% of hip fractures occur as a result of a fall.
• Direct medical costs for falls in 2013 reached $34 billion.
• Hip fractures result in more than 258,000 hospital admissions annually for those aged 65 and older.
• Neuphychiatric symptoms negatively affect functional outcomes in patients with hip fractures.

Interventions

• Patient received training in bed mobility, transfers, gait, and balance.
• Gait training progressed as strength and ROM improved.
• Transition from front-wheeled walker to rolling walker - day 19
• Balance training was made increasingly more difficult.
• Static balancing balance → dynamic sitting → static standing → dynamic standing; (reaching outside of base of support, altering surfaces, head turns, varying speed, navigating obstacles)
• Patient was often anxious and concerned with her progress. Self-efficacy training was used throughout her plan of care to increase her confidence and help alleviate her fears, as per guidelines in table below.

Patient History

• 84 year old female
• Bipolar Disorder (BD)
• High fall risk; history of falls, urinary incontinence, polypharmacy, and pain medications.
• Fell on her right side, resulting in right subcapital femur fracture.
• Arrived at Skilled Nursing Facility
  • Impaired Range of Motion
  • Pain with all movements: 9/10
  • Fearful
  • Limited bed mobility, transfers
  • Unable to ambulate
  • Impaired sitting balance

Mechanisms for enhancing self-efficacy

Performance Accomplishments: Based on the patient’s personal experiences. Favorable outcomes boost patient’s self-efficacy, while negative outcomes may cause the opposite effect.
• Set feasible and realistic goals.
• Break up large tasks into smaller components, and begin with tasks that the patient is sure s/he is able to do in order to avoid repeated failures and decreases in feelings of self-efficacy.

Vicarious experience: Based on others’ successes.
• Point out another person with similar experience or in a similar position to that of the patient who has been successful to serve as a model for that patient, in order to strengthen the patient’s ideas about his/her own capabilities.

Persuasive communication:
• Provide instructions, suggestions, and advice to the patient, which can have a positive effect on the patient’s beliefs about his/her capabilities.
• Promote realistic objectives, as opposed to unachievable goals.

Physiological state:
• After a patient’s physiological reactions to exercise, for example, or be that some pain and fatigue is normal, instead of being allowed to perceive certain physiological reactions as a sign of susceptibility or weakness.

Outcomes

Initial Evaluation Discharge

Visual Analog Scale
Right hip pain: 1/10 at rest, 0/10 with any movement of the right hip
Right hip pain: 0/10 at rest, 4/10 with weight bearing

Functional Mobility
• Bed mobility: Max assist
• Transfers: Max assist
• Gait (level surfaces): Max assist
• Bed mobility: Independent
• Transfers: modified independent; no physical assistance required, may take extra time to perform.
• Gait (level surfaces): modified independent; requires use of walking walker, ambulates unlimited distances

Balance
• Static Sitting: Good/Fair
• Static Standing: Unstable
• Static Standing: Good
• Static Standing: Good/Fair

Functional Independence Measure (FIM)

Mobility Items:
• Bed, Chair, Wheelchair - 2
• Toilet – did not test
• Tub or shower – did not test
• Locomotion:
• Walking/Wheelchair - 1
• Stairs – did not test; patient lived in ALF

Mobility Items:
• Bed, Chair, Wheelchair - 6
• Toilet – 6
• Tub or shower – 5
• Locomotion:
• Walking/Wheelchair - 6
• Stairs – did not test

Discussion

• The patient demonstrated improvements in all areas of mobility following physical therapy treatment.
• Positive outcomes may have been positively influenced by physical therapy and the inclusion of techniques to enhance self-efficacy.
• There is no single optimal method for treating patients with hip fractures; it is important to consider the individual patient and address risk for future falls.
• Mental health factors must be taken into account, as they can impact treatment and outcomes.
• Future studies should investigate the effects of bipolar disorder on patients’ self-efficacy and PT outcomes, as the number of those with this diagnosis continues to increase along with the aging population.

**References**


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