Physical Therapy Management of an In-Patient After Total Knee Arthroplasty: A Case Report.

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Background
- Increasing prevalence of knee OA and TKA
- According to the American Academy of Orthopedic Surgeons, there will have been a half a million TKA procedures performed by 2030.

Purpose
- The purpose of this case report is to describe the physical therapy management of an inpatient status post total knee arthroplasty.

Patient Description
- JR was a 69-year-old male
- Dx with Left knee osteoarthritis (OA)
- Difficulty with stairs (ascend/descend)

Figure 1 – Components of total knee replacement.

Figure 2 – Radiograph illustrating OA of medial knee compartment.

Examination

PT Diagnosis
Practice Pattern 4H: Impaired Joint Mobility, Motor Function, Muscle Performance, and Range of Motion Associated With Joint Arthroplasty

PT Goals
1. Independent with all bed mobility
2. Perform transfers with moderate independence using a FWW
3. Perform ambulation under supervision using a FWW for 40 meters, without loss of balance
4. Improve left knee ROM to 0-90 degrees
5. Improve left quad strength to 3/5
6. Patient will be able to demonstrate gait activities without knee buckling
7. Patient will demonstrate understanding of home exercise program

Interventions
- Patient Education topics: ambulation safety, transfer safety, safety with assistive devices, weight bearing status, lower extremity exercise, pain management, energy conservation, balance, discharge recommendation, therapy plan of care, and therapy goals
- Gait training with walker and functional mobility was performed each session
- Therapeutic Exercise included (Images obtained from Hep2go.com):
  - Ankle Pump
  - Long Arc Quad
  - Quad Set
  - Seated Marching
  - Heel Slide
  - Glut Set
  - Short Arc Quad
  - Straight Leg Raise

Outcomes
- Improved knee range of motion
- Decreased pain score
- Decreased level of assistance needed for functional mobility
- Improved step length and gait speed
- Improved quadriceps activation
- Improved score on Mercy Education and Preparation Survey

Discussion
- The protocols’ emphasis on early mobilization and therapeutic exercise focusing on quadriceps activation assisted JR with improving his functional mobility and strength prior to discharge from the hospital
- Factors that may have positively influenced JR’s outcome included the rehabilitation provided (occupational and physical therapy), nursing management, case management, and medical management
- JR also reported that attending a pre-operative education course on TKA improved his outcome and ability to return to home after a brief inpatient rehabilitation stay.

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