

Functional Skill Training and Group Therapy Treatment Following a Total Hip Arthroplasty in the Acute Care Setting: A Case Report.



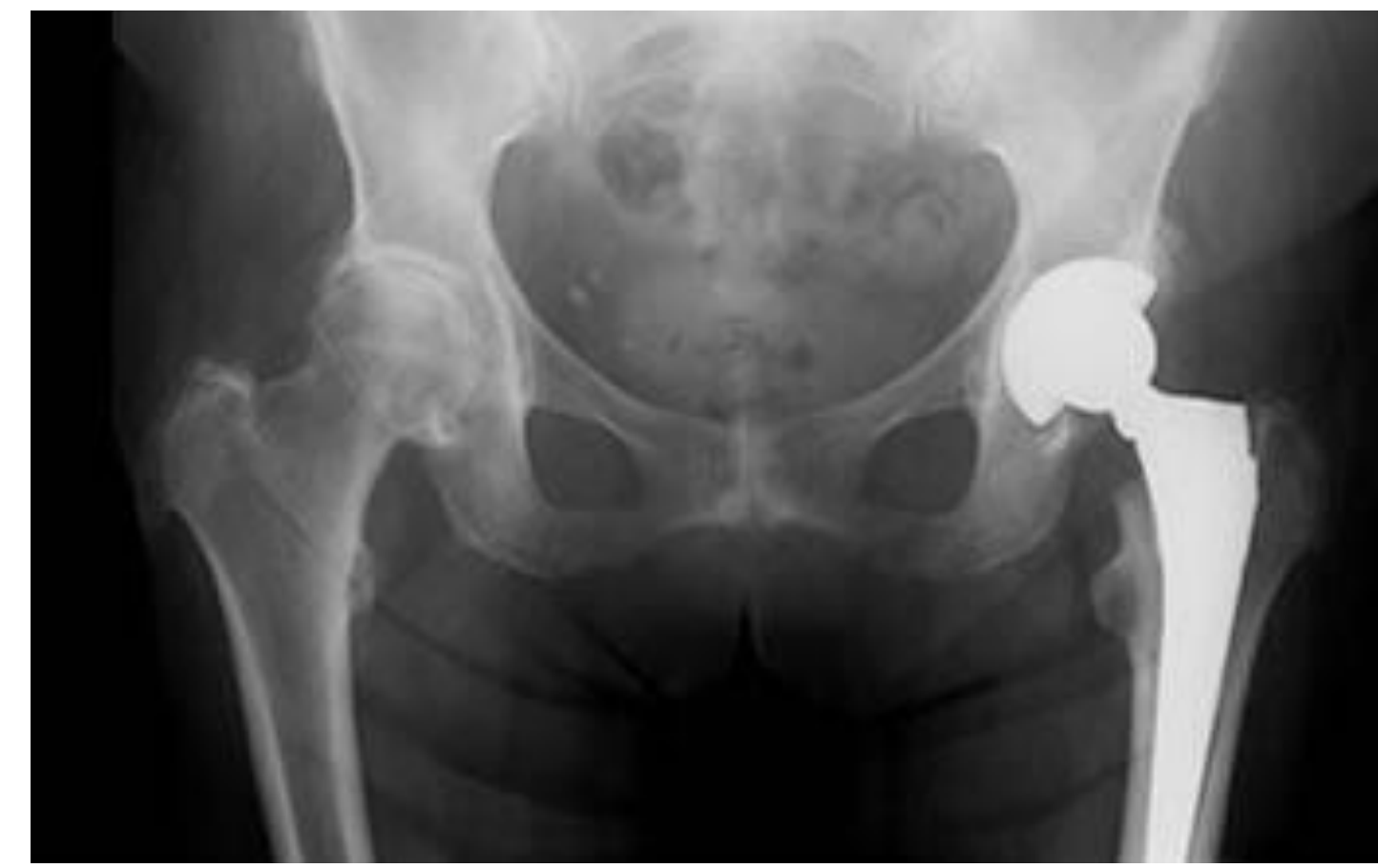
Heidi L. Johnson, BS, DPT student
University of New England, Department of Physical Therapy

Background

- Osteoarthritis (OA) is a very common degenerative condition, often developed during middle and older ages, especially in those with more active lifestyles¹.
- Although OA can occur in any joint throughout the body, it most often develops in weight-bearing joints, such as the hip¹.
- In 2011 more than 28 million people in the United States were estimated to have OA¹.
- OA can lead to pain, stiffness, decreased range of motion, decreased strength, and in turn an overall decline in functional ability¹.
- Total hip arthroplasty (THA) is becoming more widely utilized as a means for gaining mobility and independence when a person's degenerative hip is no longer allowing their desired level of function.
- With the aging population and increased need for THA, research suggests there is a strong need for physical therapy in order for patient's to achieve optimal functional results³.
- Current literature supports the use of early mobilization⁶ and functional task oriented training⁷, however there is minimal research in support or in refute of the use of group therapy treatment.
- Although many articles have been published regarding THA, not many include the acute care setting and short-term rehabilitation benefits.



Severe OA in the left hip



Post operative left THA

Purpose

The purpose of this case report is to provide an overview of hip OA and THA, and to report on a specific case describing the examination, management, and outcomes of a patient with a THA in the acute care setting.

Case Description

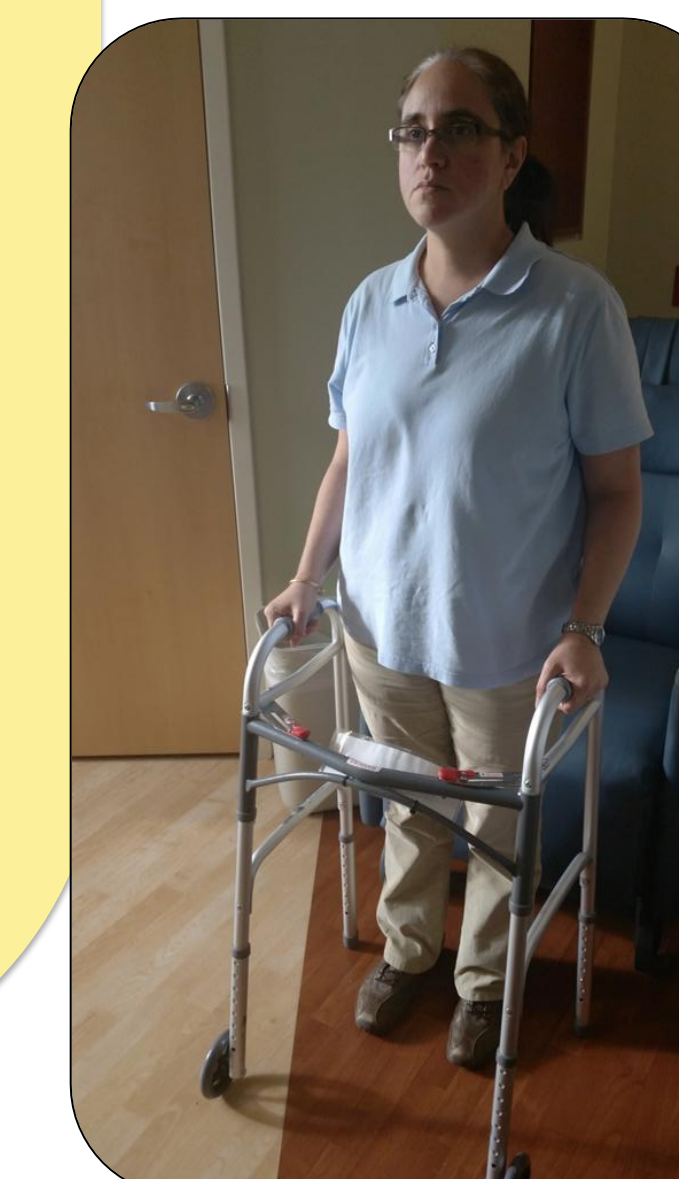
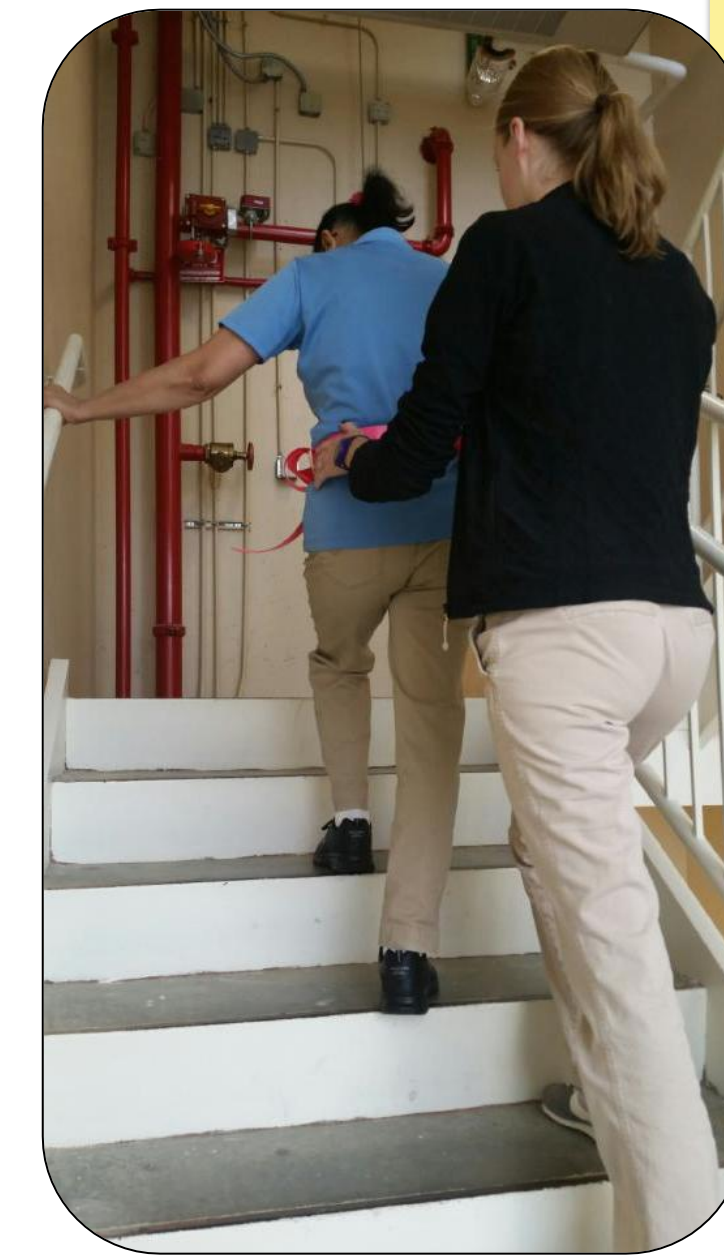
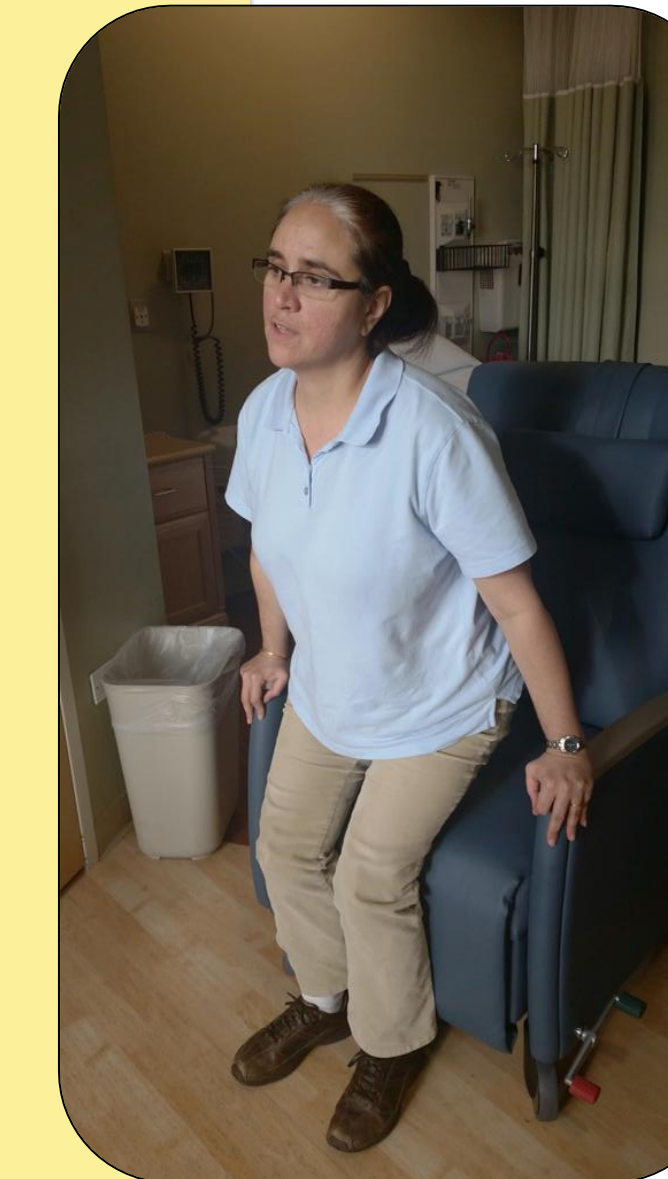
- The patient was a 86 year old male admitted to the acute care facility with a THA.
- Relevant Clinical Findings Included:
 - Decreased left hip ROM (adhered to posterior hip precautions)
 - Decreased left hip strength
 - Decreased dynamic standing balance
 - Decreased activity tolerance
 - Abnormal gait
 - Unsafe bed mobility, transfers, ambulation and stair negotiation
- The patient was seen for 3 consecutive days for skilled PT interventions
 - 2 individual treatment sessions per day x 30 minutes each
 - 2 group treatment sessions per day x 30 minutes each
- PT management involved both individual treatment and group therapy sessions with a focus on functional task training, to include bed mobility, transfers, ambulation, and stair negotiation, as well as therapeutic exercise.

Acknowledgements

The author acknowledges Noel Squires, MPT, DPT, OCS, CCI for assistance with development and redrafting of this poster, as well as Candace Jones Thorpe, ATC, PT and Pervin Narielvala, OT for assistance with the photography.

Interventions

Functional Task Training:



- ❖ Over 3 consecutive days the patient performed a progression of the following functional tasks:
 - Bed Mobility
 - To promote independence and safety in preparation for out of bed mobility
 - Rolling, supine to sit, sit to supine
 - Transfers
 - To improve independence and safety in preparation for ambulation
 - Edge of bed, chair, car simulator
 - Ambulation
 - To promote independence and increase activity tolerance to allow for safe household and community ambulation
 - Stair Negotiation
 - To allow for safe entry into home, throughout home, and within the community

- ❖ The patient was progressed by distance, level of assistance and amount of cueing provided (verbal and tactile)
- Progression was based on:
 - Safety, pain, fatigue, and activity tolerance

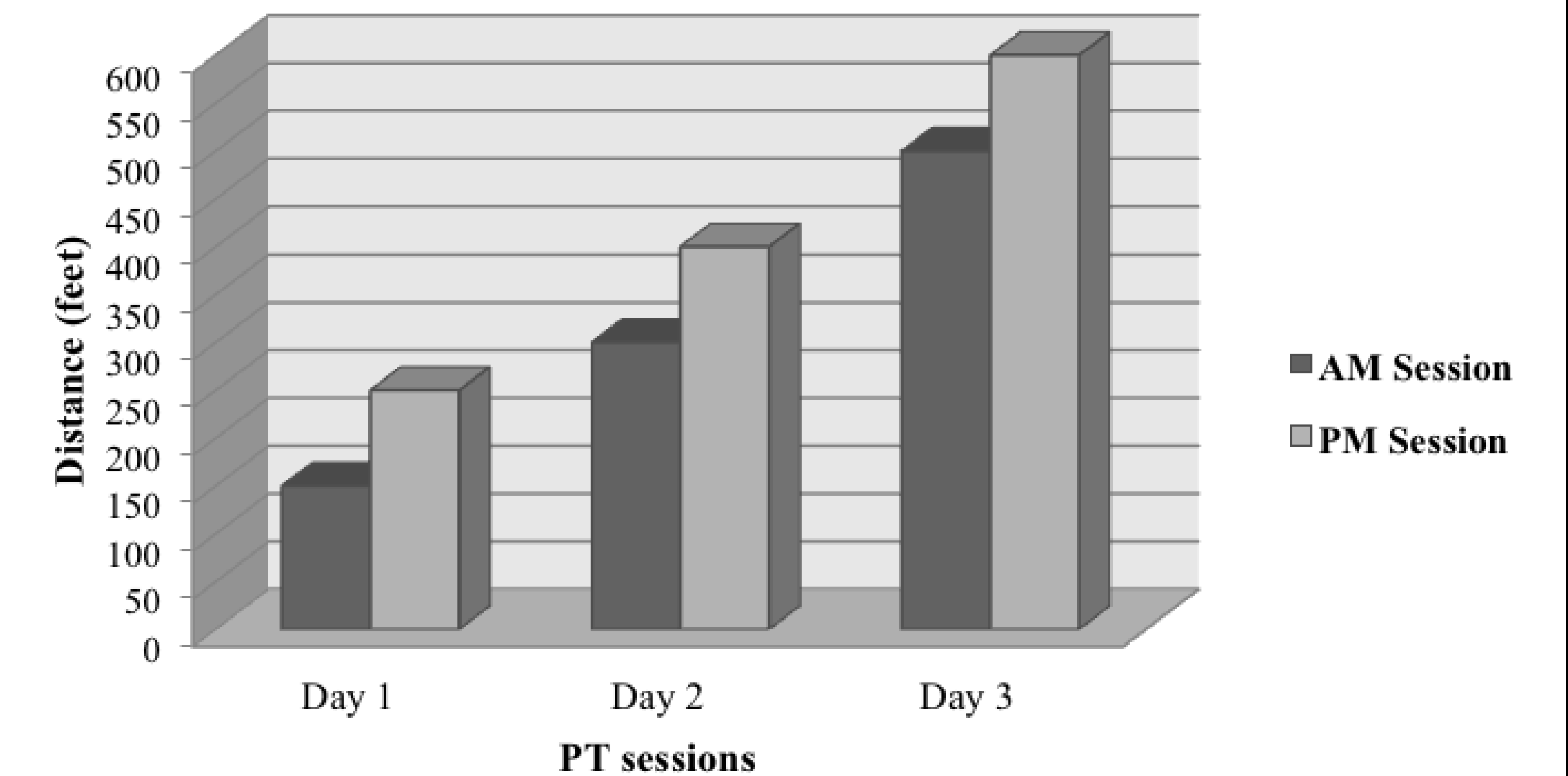
Group Therapeutic Exercise:

- ❖ The patient participated in group treatment sessions with a focus on therapeutic exercise 2x per day
- ❖ All other group participants were patients with total joint replacements (hip and knee)
- ❖ The exercises were categorized into 3 positions and included:
 - Long sit without support board under legs
 - Ankle pumps
 - Quad sets
 - Glut sets
 - Long sit with support board under legs
 - SAQ sets
 - Active hip abduction (snow angel)
 - Active hip flexion (heel slides)
 - Sitting with legs in a dependent position
 - Seated marching
 - LAQ sets
 - Heel raises
 - Toe raises
 - Triceps extension (chair pushup)



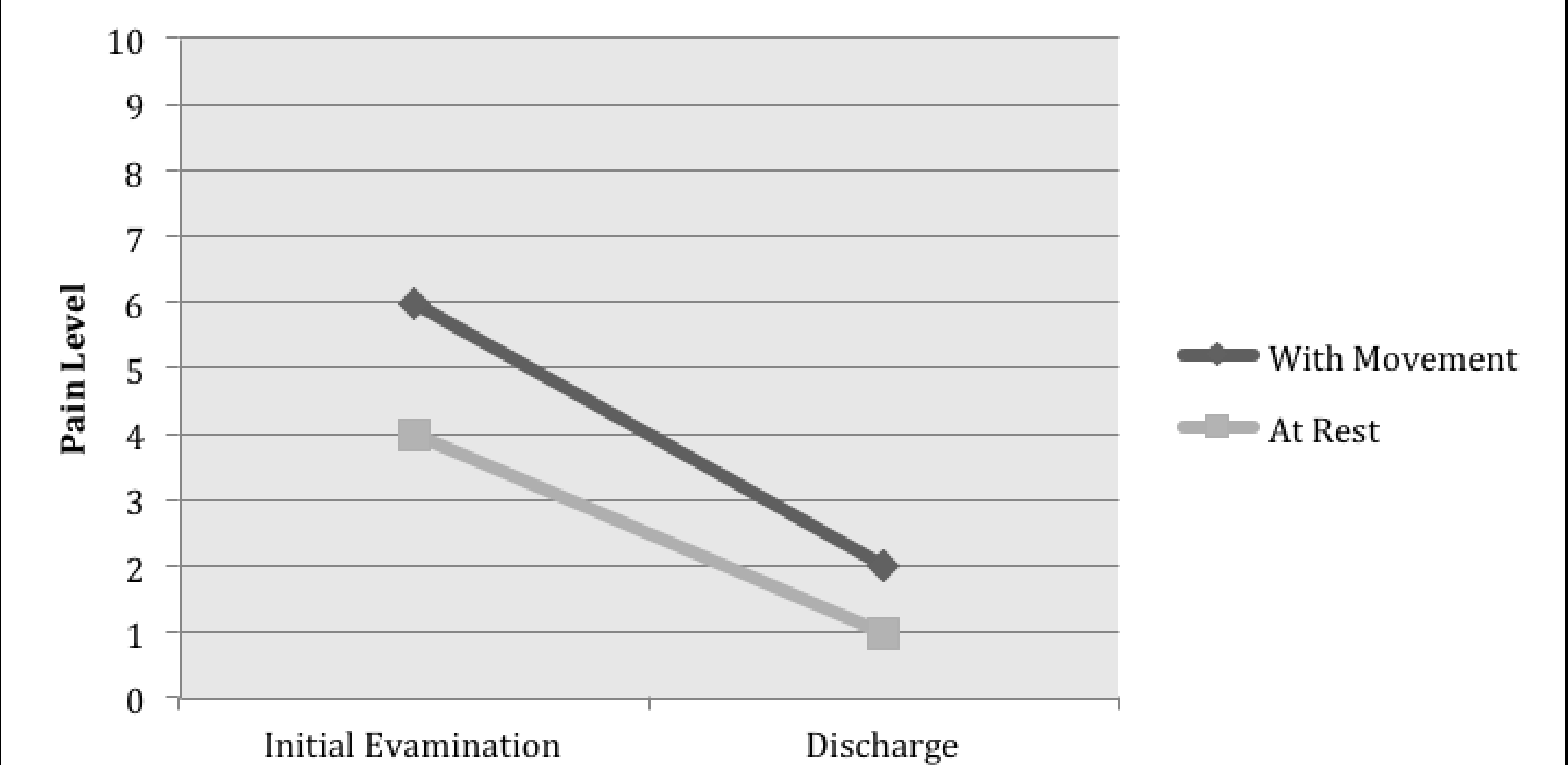
Outcomes

Ambulation



- The patient also improved in transfers and stair negotiation, requiring less physical assistance, as well as less tactile and verbal cueing.

Visual Analog Scale (VAS)



Discussion

- The patient's acute hospital stay yielded positive results in the acquisition of safe mobility in order to return home.
- The implementation of early mobilization and ambulation can decrease the length of stay in the hospital post surgery for patients with a THA⁶.
- Functional task-oriented exercises have been shown to improve disability, pain, activities of daily living, and overall quality of life after THA⁷.
- The findings and outcomes from this case coincide with the proposed benefits and positive influences of physical therapy in the acute care setting following a THA.
- Additional literature may be needed to better determine the effectiveness of group therapy treatment in acute care, as there is minimal research available in regards to its use in this setting.

References

1. Orthoinfo.aaos.org. Osteoarthritis of the Hip-OrthoInfo - AAOS. 2015. Available at: http://orthoinfo.aaos.org/topic.cfm?topic_id=9211.
2. Beaupre LA, Masson EC, Luckhurst BI, Arafig O, O'Connor GI. A randomized pilot study of a comprehensive exercise program compared with usual care following primary total hip arthroplasty in subjects less than 65 years of age: feasibility, selection of outcome measures and timing of assessment. BMC Musculoskeletal Disorder Journal. 2014 Jun 2; 14: 192. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4248921/>.
3. Marie Suszynski. Hip Replacement Surgery: Working with a Physical Therapist. *Everyday Health*. <http://www.everydayhealth.com/hs/hip-replacement-physical-therapy/>.
4. <http://radiopaedia.org/cases/osteoarthritis-of-the-hip-1>
5. <http://orthosurgeryaz.com/services/new-technology/other-services>
6. Wellman SS, Murphy AC, Guleyski D, Murphy SB. Implementation of an accelerated mobilization protocol following primary total hip arthroplasty: impact on length of stay and disposition. *Current Reviews in Musculoskeletal Medicine*. 2011 Sep; 4(3): 84-90. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3261249/>.
7. Monticone M, Ambrosini E, Rocca B, Lorenzon C, Ferrante S, Zatti G. Task-oriented exercises and early full weight-bearing contribute to improving disability after total hip replacement: a randomized controlled trial. *Clinical Rehabilitation Journal*. 2014 Jan 23;28(7) 658-668. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4459172/>.