

Acute Care Physical Therapy and Early Mobilization for a Patient Following Bilateral Staged Anterolateral Total Hip Arthroplasties: A Case Report

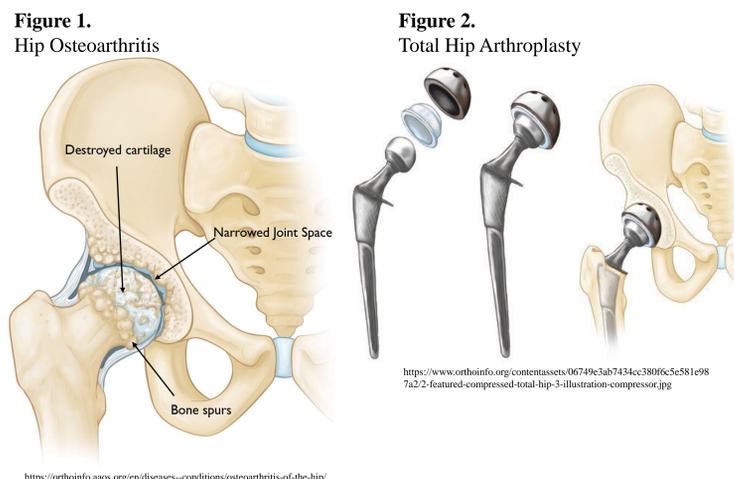
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Background and Purpose

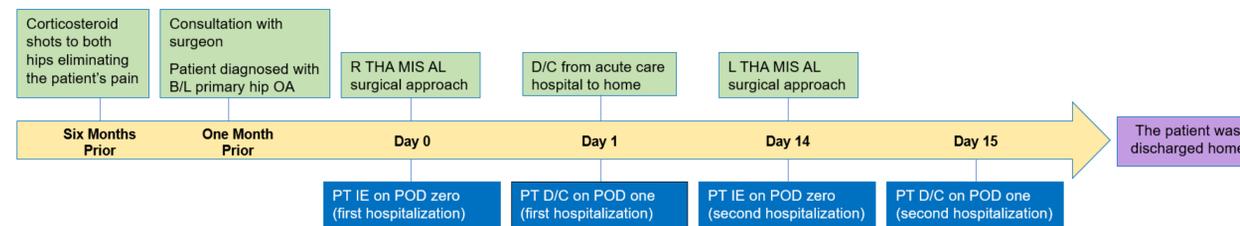
- Primary hip osteoarthritis (OA) is a leading cause of significant hip pain resulting in disability, joint stiffness, and loss of function.^{1,2}
- 42% of people with hip OA have it in both hips²
- Minimally invasive surgery using an anterolateral approach spares the hip external rotator muscles and posterior hip capsule³
- Staged bilateral total hip arthroplasty (THA): two separate surgical procedures during different hospitalizations⁴
 - Lower risk of deep vein thrombosis (DVT)^{4,5}, but higher risk of complications overall^{4,5,6} compared to simultaneous bilateral THA
- Early mobilization (EM) following THA is associated with lower pain levels⁸ and reduced length of stay (LOS)⁹
- The purpose of this case report was to add to the limited literature describing acute care physical therapy (PT) management of patients receiving staged BTHA and to document both episodes of care.



Patient History

- 75-year-old male patient had a significant past medical history (PMH) impacting PT plan of care
- Cardiovascular: coronary artery disease, hyperlipidemia, myocardial infarction (12 years prior), DVT of right lower extremity (11 years prior), hypertension
- Musculoskeletal: low back pain with lower extremity numbness; decreased bilateral hip range of motion; diagnosed with bilateral hip OA
- First hospitalization (H1): right THA; Second hospitalization (H2): left THA; staged two weeks apart

Figure 3. Episode of Care Timeline



Abbreviation key: B/L: bilateral, R: right, MIS: minimally invasive surgery, AL: anterolateral, D/C: discharge, IE: initial evaluation, POD: post-operative day

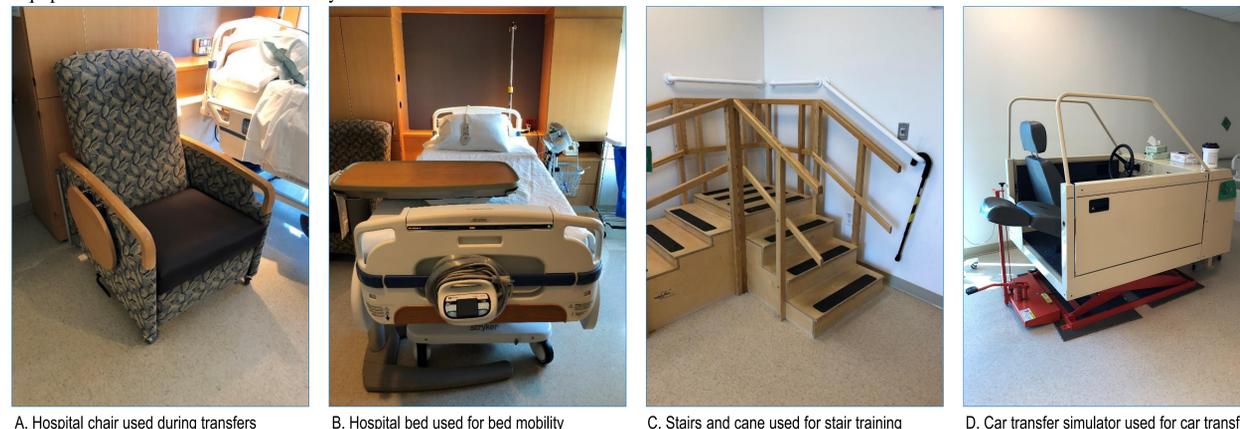
Initial Evaluations

- Gross Strength**
 - Lower extremity strength
 - Assessed using manual muscle testing grades
- Patient-reported Pain**
 - Numeric Rating Scale for pain
 - Patient set goal: 4/10 for H1, 3/10 for H2
 - Assessed throughout
- Functional Mobility**
 - Bed mobility
 - Transfers
 - Ambulation
- Patient Education**
 - PT plan of care
 - Weight bearing status
 - Therapeutic exercise
 - Safe use of front wheel walker

Discharges

- Gross Strength**
 - No significant changes were noted for gross strength
- Patient-reported Pain**
 - The patient never reported pain that exceeded a tolerable level that he pre-selected
 - H1: significant increase in pain during ambulation and at rest following treatment
 - H2: significant decrease in pain at rest prior to treatment and at rest following treatment
- Functional Mobility**
 - Bed mobility
 - Transfers
 - Ambulation
 - Car transfer
 - Stairs
 - Demonstrated at a level that was deemed safe for D/C home
- Patient Education**
 - Safe use of front wheel walker
 - Home exercise program
 - Mobility safety

Figure 4 A-D. Equipment used for Functional Mobility



Outcomes

- First Hospitalization: Right THA
 - Frequent cues for safety and proper sequencing during functional mobility
 - All but two goals were met
 - He continued to require cues and supervision for ambulation and transfers
- Second Hospitalization: Left THA
 - Cues for proper sequencing during functional mobility
 - All goals were met

Discussion

- This patient had an excellent result following THA despite an involved PMH and short LOS.
- No adverse events occurred during the acute care PT management of this patient
- There was no follow-up with the patient following second discharge (D/C).
- Limitations: Little opportunity for clinical judgement concerning therapeutic exercise prescription and referral for PT services following D/C due to guidelines
- Future research: monitoring the effects of D/C on post-operative day one following a THA, effects of EM on these patients, and research/development of a PT test and measure that can be safely used following THA

Acknowledgements

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