Acute Care Physical Therapy Management of a Former Professional Athlete Following Unicompartmental Knee Arthroplasty: A Case Report

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Background
• Unicompartmental knee arthroplasty (UKA): replacement of one compartment of the tibiofemoral joint.
• A balance between an ambitious plan of care and mindfulness of the acute inflammatory process poses a challenge for acute care physical therapists.
• There is a lack of literature that addresses the acute care physical therapy management of patients who have undergone this procedure.
• Specifically, little is known about the acute care physical therapy management of former elite athletes who undergo UKA in middle age.

Purpose
To describe the acute care physical therapy management of a former professional tennis player immediately following UKA.

Case Description
• 52 year old female former professional tennis player
• Diagnosed with osteoarthritis in 2010
• UKA in 2014
• No major physical co-morbidities

Examination
• Vital signs
• Bed mobility, transitions, and transfers
• Gait assessment, and assessment of assistive device need
• Manual muscle testing, range of motion assessment
• Numeric Pain Rating Scale
• Lower Extremity Functional Scale (LEFS) and Barthel Index

Interventions

Day 1
- Initial Examination
- Treatment 1: Therapeutic exercise, 2 sets of 10 each, 2x day
- Bed mobility
- CPM: cryotherapy, 4 to 6 hours daily
- Patient education

Day 2
- Treatment 2: Therapeutic exercise, 2 sets of 10 each, 2x day
- Bed mobility
- Transfer training
- Gait: level surface w/ axillary crutches: 30°
- Gait: level surface w/ axillary crutches: 100°
- Stairs w/ axillary crutches: 12 stairs

Day 3
- Treatment 3: Therapeutic exercise, 2 sets of 20 each, 2x day
- Bed mobility
- Transfer training
- Gait: level surface w/ axillary crutches: 100°
- Gait: level surface w/ axillary crutches: 20°
- Stairs w/ axillary crutches: 12 stairs

Outcomes

Discussion
• A former professional athlete may benefit from an accelerated plan of care that exceeds minimum discharge expectations in the acute care setting, following a UKA procedure.
• Future research should explore plans of care that exceed the typically prescribed exercises and functional training immediately after UKA surgery.
• Future research should also focus on utilizing the Barthel Index and LEFS for active populations after undergoing UKA and other orthopedic surgeries.

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