

The Use of Electrical Stimulation and Cryotherapy in Pain Reduction for a Patient Following an Arthroscopic Partial Meniscectomy: A Case Report

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Background

- An arthroscopic partial meniscectomy is a common procedure that consists of removing some of the meniscus from the tibio-femoral joint. It is a minimally invasive surgery.
- Following the procedure, physical therapy is used to improve function. In many cases, some level of pain management is utilized which may include Transcutaneous Electrical Nerve Stimulation (TENS) and cryotherapy.
- TENS has been shown to be more effective than pain medication following arthroscopic knee surgery and aid in faster regains of strength and range of motion.
- Cryotherapy for pain management has been shown to have a significant effect on the level of pain, amount of pain medication consumption, and weight-bearing status in arthroscopic knee surgeries.
- There is little information about TENS and cryotherapy used together and their effectiveness on pain relief.

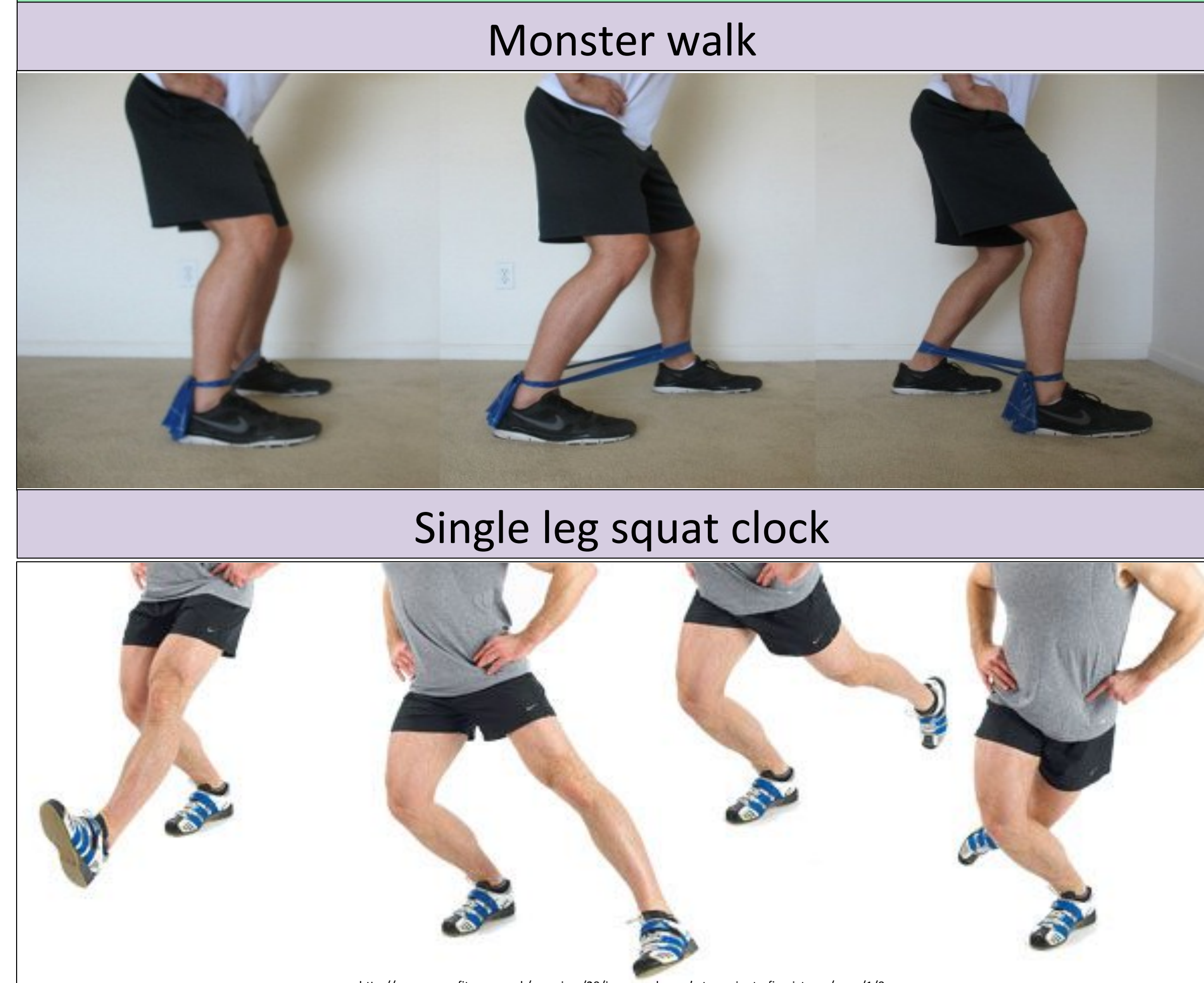
Purpose

The purpose of this case report is to describe the patient management and outcomes of a patient who underwent a partial medial meniscectomy treated with TENS and cryotherapy with the goal of minimizing pain prior to functional strengthening to return to the workplace.

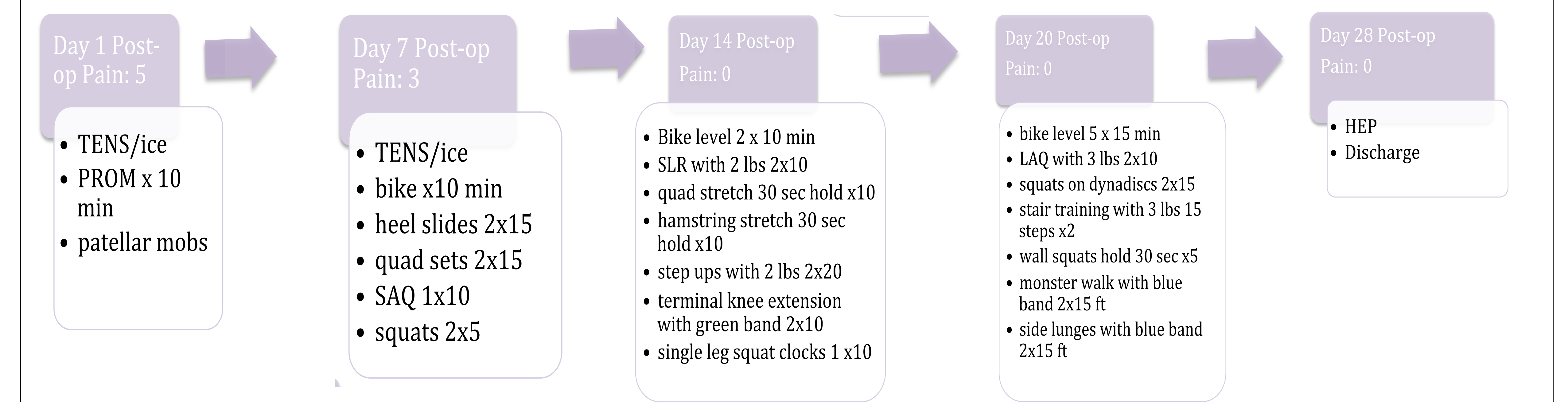
Case Description

- The patient was a 55-year-old female one day status post left knee partial medial meniscectomy
- The cause for surgery was a medial meniscal tear from a fall
- Initial exam revealed decreased strength and range of motion, an antalgic gait, pain and swelling of left knee
- Patient had 13 physical therapy treatment sessions over 4 weeks
- PT included: combination of cryotherapy and TENS to address pain followed by functional strengthening program
- Outcome measures included:
 - APTA Optimal
 - KOOS Knee survey
 - Lower Extremity Functional Scale
 - Patient-Specific Functional Scale
 - Timed 10-Meter Walk Test

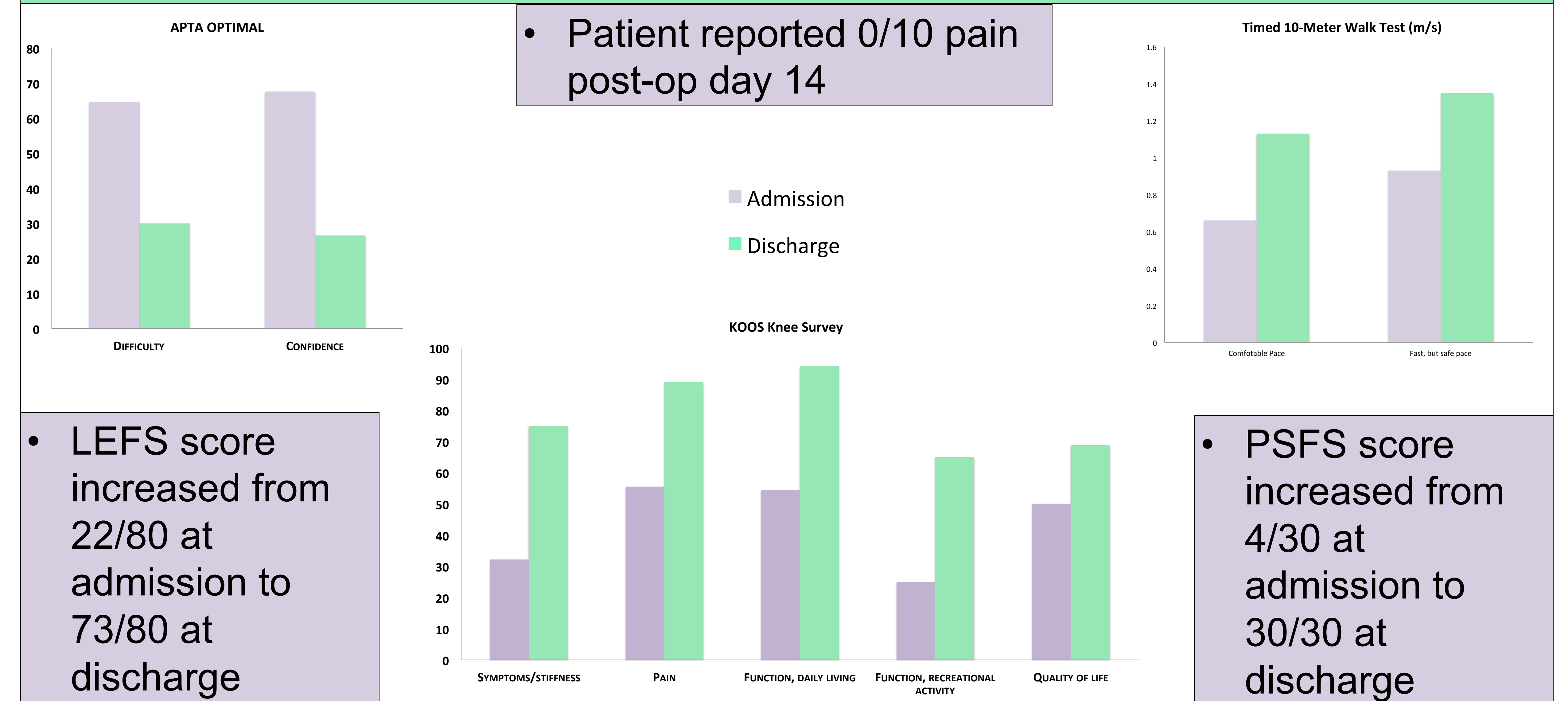
Intervention Examples



Interventions



Outcomes



Discussion

- This case report describes the use of TENS and cryotherapy in pain management of a patient following an arthroscopic partial medial meniscectomy.
- The patient made excellent progress during the 13 physical therapy treatment session and was satisfied to reach her goals of having no pain and being able to return to work at regular duty without any issues.
- Further research should be concluded to see the effects of multiple modalities for pain relief on other populations.