

Physical Therapy Management of a Patient with Chronic Knee Pain: A Case Report

Mohamed Elsaid, BA

Department of Physical Therapy, University of New England, Portland, Maine



Background

- Knee pain affects approximately 25% of adults, and as a result limits functional mobility and may induce participation restrictions.¹
- Risk factors may contribute to knee pain, with osteoarthritis (OA) being the most prevalent cause in individuals 50 years and older.¹
- The rate of knee replacement surgery among individuals 65 and older has increased by approximately eight fold from 1979-2002.
- Physical Therapy (PT) is a non-surgical option that offers individuals relief.

Purpose

- Review the PT treatment and management for a patient with chronic knee pain.
- Use of evidence based interventions, such as therapeutic exercises, joint mobilization, application of KT, and a home exercise program (HEP).

Case Description

- 48-year-old Caucasian female with chronic right knee pain.
- **Chief Complaints:** inability to walk for longer than 20 minutes, inability to bend down, and difficulty with stairs
- **Focus:** strengthening the right knee, increasing ROM, improving stair climbing, improving gait pattern, application of Kinesiotape (KT), and manual therapy to improve joint mobility

Examination and Outcomes

Test and Measures	Initial	Final
Right Knee ROM	Flexion: 86° Extension: 9°	Flexion: 115° Extension: 5°
Right Knee Strength	Flexion: 4/5 Extension: 4/5	Flexion: 5/5 Extension: 5/5
Hip Extension Strength	Left: 3/5 Right: 3-/5	Left: 4+/5 Right: 4+/5
Numeric Pain Rating Scale	Current: 4/10 Best: 2/10	Current: 2/10 Best: 2/10
Lower Extremity Functional Scale (LEFS)	42/80	60/80

Interventions



<http://www.hep2go.com>



<http://www.hep2go.com>



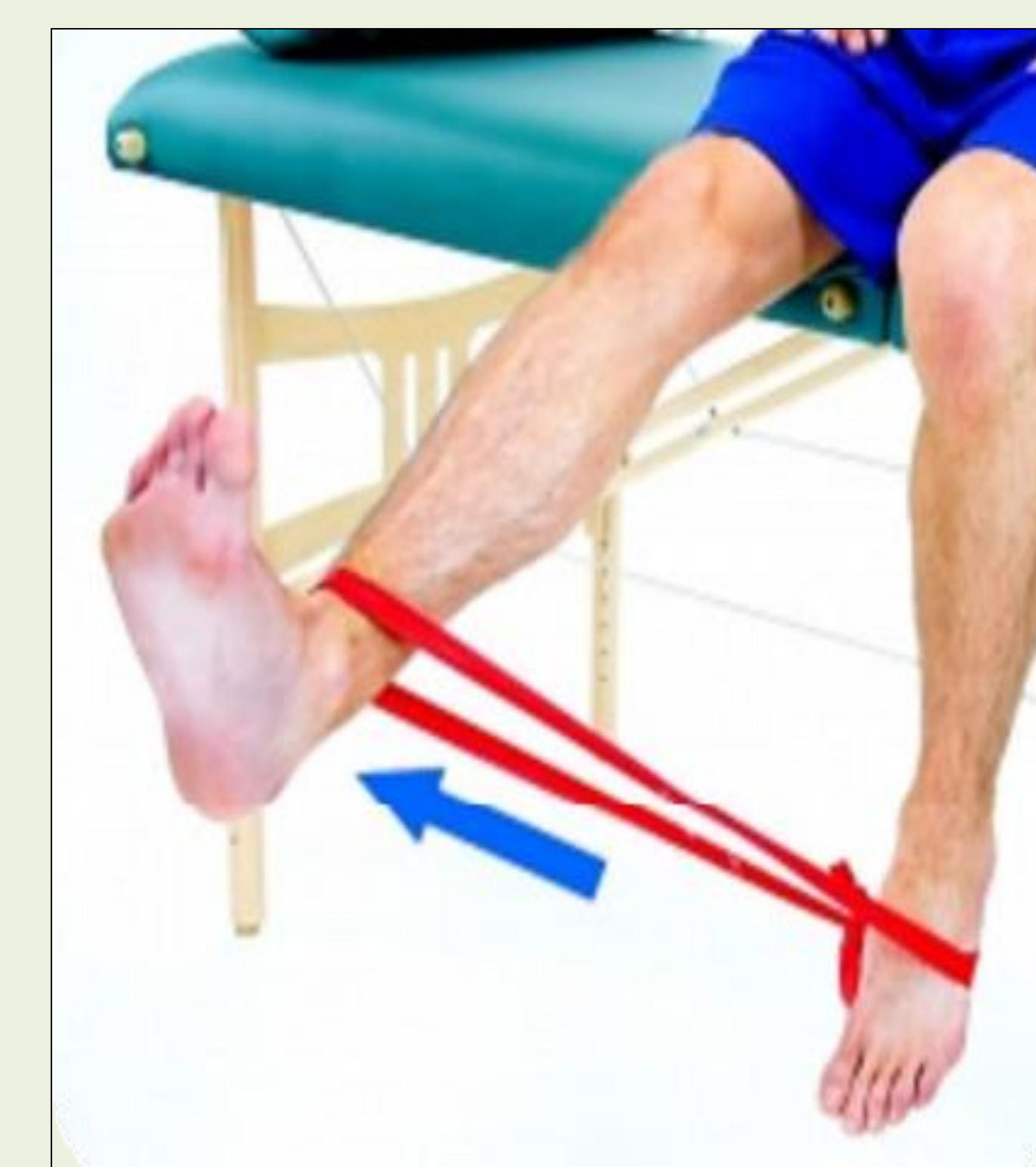
https://www.google.com/search?q=i+strip+kinesio+tape&aspy=2&biw=1280&bih=643&source=images&img=isch&sa=X&ved=0ahLKEwDgOOUZLXOAHUE44MKHXDpA8sQ_AUICCGDfBm=isch&q=kt++strip+knee&img=stripOnLuAF6M%3A



https://www.google.com/search?q=i+strip+kinesio+tape&aspy=2&biw=1280&bih=643&source=images&img=isch&sa=X&ved=0ahLKEwDgOOUZLXOAHUE44MKHXDpA8sQ_AUICCGDfBm=isch&q=kt++strip+knee&img=stripOnLuAF6M%3A



<http://www.hep2go.com>



<http://www.hep2go.com>

Goals

Goal	Status
Right knee active range of motion (AROM) of at least 100 degrees without pain for improved ambulation	✓
The patient will report a zero- two out of ten on the NPRS for improved functional mobility	✓
Right knee AROM extension of zero degrees	✗

Discussion & Conclusion

- Successful outcome as was measured by the patient's decrease in pain level, increased strength, and increased participation.
- Combination of therapeutic exercises, manual therapy, KT, and HEP demonstrated improvement for this patient's impairments and functional capabilities.
- LEFS was a beneficial outcome measure to measure level of improvement and participation levels.
- Limited information in the literature discussing the effects of smoking on articular cartilage among females
- Beneficial to examine the efficacy of KT in conjunction with manual therapy in treating chronic knee pain

Acknowledgements

The author acknowledges Mike Fillyaw, PT, MS for assistance with case report conceptualization with case report, Deborah Tuttle, PT, CMP for supervision and assistance with patient treatment, and the patient for compliance and participation with case report.

References

Nguyen US, Zhang Y, Zhu Y, Niu J, Zhan B, Fleson DT. Increasing prevalence of knee pain and symptomatic knee osteoarthritis: survey and cohort data. *Ann Intern Med.* 2011;155(11):725-732. doi: 10.7326/0003-4819-155-11-201112060-