The Use of Medical Exercise Therapy for a Post-operative Gastrocnemius Recession Patient After Multiple Conservative Physical Therapy Treatments Failed: A Case Report

C Cross, BS, DPT student
University of New England

Background

Achilles Tendonitis1,2
• Affects 9% of all recreational runners
• Treatment is variable
• Surgery is controversial

Gastrocnemius Recession3,4
• Small incision to postero-medial lower leg to release gastrocnemius tendons
• Most commonly used to treat chronic achilles tendonitis
• No known literature for the post-operative physical therapy management

Medical Exercise Therapy (MET)5
• Developed by the Holten Institute
• 60 minutes of graded exercise
• High repetitions with low weight
• Functional weight bearing during functional movement patterns

Case Description

• 30 year-old female who was an avid runner with chronic achilles tendonitis in her left ankle
• Pes cavus foot structure
• Underwent a gastrocnemius recession after 3 failed attempts of conservative physical therapy
• Chief complaints after surgery: pain, weakness, and instability
• Goal: run 30 minutes without pain

Examination

<table>
<thead>
<tr>
<th>Impairments</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>Unable to exercise</td>
</tr>
<tr>
<td>Strength</td>
<td>Disabilities</td>
</tr>
<tr>
<td>Range of Motion</td>
<td></td>
</tr>
<tr>
<td>Locomotion</td>
<td></td>
</tr>
<tr>
<td>Skin</td>
<td></td>
</tr>
<tr>
<td>Symmetry</td>
<td></td>
</tr>
</tbody>
</table>

Short Term Goals

• Regain left ankle ROM
• Improve left ankle strength to 4+/5
• Be able to walk 3 days a week for 20 minutes without report of increased pain
• LEFS score of 40/80 & PSFS score of 7/10

Interventions

• 70 minutes of physical therapy 3 times a week for 6 weeks.
• Exercises chosen to promote return to running.

Therapeutic Exercise
• Lower Body Ergometer, Ankle PRE, Terminal Knee Extension, Bridges

Therapeutic Activities
• Deloaded Squats & Step-ups, Single Leg Balance, Standing Hip Abduction & Hip/Knee Extension, Eccentric Calf Raises

Patient Specific Function Scale

- Manual Therapy
  • Cross Friction, Retrograde, and Effleurage Massage

Discussion

MET was a viable intervention for a patient after a gastrocnemius recession as treatment for chronic achilles tendonitis. The patient reported satisfaction despite constant pain and slow return to activity. The slow-paced improvements may be related to the chronicity of the tendonitis, length of time she spent inactive, and her pes cavus foot structure. Future research should be conducted with a larger sample size for a longer duration.

Outcomes

• Improvements made in all areas
• MMT: goal met, except for plantarflexion which was 4/5
• Pain: decreased from constant 3-4/10 to constant 2-3/10
• Able to walk for 30 minutes and bike for 20 minutes without increased pain; did not trial running

Home Exercise Program

Eccentric calf raises
• Instructions: rise onto toes of both feet. Slowly lower left heel down, then return to start position.
• 3x30 sets at least 3 times a day

Standing Calf Stretch
• Gastrocnemius and Soleus
• 3x30 seconds each

Acknowledgements

The author acknowledges Kirsten R. Buchanan, PhD, PT, ATC for the conceptualization of this report.

References


