Effects of Trigger Point Dry Needling in Conjunction with Intramuscular Electrical Stimulation for a Patient with Lumbar Radiculopathy: A Case Report

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PURPOSE:
Low back pain is a prevalent issue which affects 60-80% of people worldwide. A common cause of back pain can be from nerve root involvement, disc herniation, or even myofascial pain syndrome which can cause trigger points that can even mimic a disc herniation.

The purpose of this case was to see the benefits of Trigger Point Dry Needling in conjunction with Intramuscular Electrical Stimulation for the treatment of lumbar radiculopathy regarding the range of motion, strength, sensation, reduction of pain, improve functional ability, and quality of life.

METHODS:

CASE DESCRIPTION:

Visit #1
Anti-Gravity Treadmill x10 minutes at 70% body weight
3x10 second static stretching to bilateral hamstrings and gastrocnemius muscles
k10 mini squats
Dry needling to bilateral lumbar multifidus, right gluteus medius, piriformis, both heads of hamstrings, and both heads of gastrocnemius with electrical stimulation
HEP: Rest and glute squeezes

Visit #2
Anti-Gravity Treadmill x10 minutes at 80% body weight
3x10 second static stretching to bilateral hamstrings and gastrocnemius muscles
k12 mini squats
Dry needling to bilateral lumbar multifidus, right gluteus medius, piriformis, and both heads of hamstrings with electrical stimulation
HEP: Rest and glute squeezes

Visit #3
Anti-Gravity Treadmill x10 minutes at 90% body weight
3x10 second static stretching to bilateral hamstrings and gastrocnemius muscles
k14 mini squats
Dry needling to bilateral lumbar multifidus, right gluteus medius, and piriformis with electrical stimulation
HEP: Rest, glute squeezes, and mini squats

Visit #4
Treadmill with 100% body weight x5 minutes
3x10 second static stretching to bilateral hamstrings and gastrocnemius muscles
k16 mini squats
Yellow theraband lateral walks 3x10 reps

RESULTS:
Upon completion of 4 visits over 2 weeks:

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Initial</th>
<th>Post</th>
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</thead>
<tbody>
<tr>
<td>Lower Extremity Functional Scale:</td>
<td>22.5% Physical Function</td>
<td>93.8% Physical Function</td>
</tr>
<tr>
<td>Oswestry Disability:</td>
<td>60% Disability</td>
<td>18% Disability</td>
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<tr>
<td>Straight Leg Raise:</td>
<td>25 Degrees</td>
<td>90 Degrees</td>
</tr>
<tr>
<td>Pain:</td>
<td>7/10</td>
<td>0/10</td>
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</tbody>
</table>

CLINICAL APPLICATION:
Traditional interventions for this diagnosis include strengthening exercises, modalities such as transcutaneous electrical stimulation, and even surgery as a last resort. There is limited research available regarding Trigger Point Dry Needling in conjunction with Intramuscular Electrical Stimulation for lumbar radiculopathy. This case report supports the idea that this physical therapy treatment intervention has positive outcomes in a short duration improving quality of life and functional ability.

REFERENCES: