Electrical Stimulation Type (Body Relax) in the Treatment of Chronic Lower Back Pain for the Players Physical Strength

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Abstract

Chronic back pain is one of the most common injuries in physical strength players. The importance of research is to relieve pain in the lower back muscles and reduce the complications that result from chronic pain reduction using a type of electrical stimulation with frequencies dedicated to muscle relaxation. The problem of research lies in the lack of use of technical means of effective and direct impact in the rehabilitation of lower back injuries of physical strength players, especially that this group of players need special care in the process of rehabilitation. The aim of the research was to use the electromyostimulate (EMS) type body relax in the treatment of chronic low back pain and to know its effect on those with the pain. The researchers used the electrical stimulation used by the researchers to have a positive effect in reducing chronic pain and rehabilitation of the lower back muscles of the physical strength players in question. The research method used the experimental method of one group and identified the research community of players with low back pain in the physical strength of the successors in Najaf, and the sample of the study (6) injured players were chosen by deliberate method, and used the form of measuring the degree of pain according to the test Shopper and physical tests. The training program included the use of EMS for muscle relaxation. The researchers used the statistical program (SPSS) and used the following statistical means (median, spring deviation, and toxin).

The most important conclusions reached by the researchers are:

1. The electrical stimulation of the body relax is a major role in reducing the level of chronic low back pain and improve the physical flexibility of the muscles of the lower back of the players of physical strength.

Keywords: Electrical stimulation, Chronic, Lower back pain and Physical strength.

Introduction

What has happened in terms of training and therapeutic in the world is the result of scientific studies programmed according to correct directions and effective use of the results of research and studies that have a key role in reaching scientific facts that contribute to the development of the level of treatment and rehabilitation of injured players and the speed of the return of the player to field.

The effectiveness of physical strength of the activities that need to mobilize maximum muscle strength to overcome the weight of the weight and these weights cause pressure on the spine, especially the lumbar paragraphs, causing pain in the lower back. As a large proportion suffer from this injury and most of the rehabilitation programs for this injury requires a relatively long period of time, starting from the moment of pain relief until the arrival of the player to the normal situation that was before the injury and this period may reduce the motivation of the player to implement the rehabilitation programs correctly than It presents chronic pain in the lower back area.

Therefore, the researcher saw the use of EMS and body relax to eliminate muscle tension and thus eliminate the pain of the lower back of the players of physical strength. [1]

And the effectiveness of the force of the activities that specialists have developed through the use of all means that increase the player's physical and functional potential, especially through the appropriate ways and means for players and equipment and devices used by athletes in training units, but the
high frequency of high weights and frequent repetitions lead to increased pressure on the region of lumbar vertebrae and impotence, which causes pain in the lower back and this requires the use of modern techniques to overcome such situations as the technology of the newly used in the training and therapeutic,[2] as this technique can be used for a thief of chronic muscle strain, particularly in the lumbar region or dyslexia, is known as the body relax. This type of muscle relaxes the muscles. Hence, the importance of research in the use of the technique of electrical stimulation of muscles and body relax type to treat cases of muscle tension in Lumbar region for physical strength players. [3]

Research Methodology
The researchers used the one-group experimental approach as the most appropriate method to solve the research problem.

Community and Sample Research
The research community was identified as the physical strength players in Najaf Governorate who suffer from chronic muscle cramps and muscular spasm in the lower back of 10 players.

A sample of them was chosen by (6) players who were selected by the intentional manner 60% of the research community.

Figure 1: Explain Community and sample research

Means of Collecting Information, Devices and Tools Used
- Observation and experimentation.
- Testing and measurement.
- Questionnaire.
- Chinese-made muscular stimulation
- Fitness room
- Tape measure
- Electronic timing clock type (Diamond) number (1).

The Procedures of Field Research
Select Research Tests

Measuring the Level of Pain According to the Range of Motion [4]
The level of pain was measured in a pre-prepared form where the motor ranges can be measured according to the Schober test to determine the extent to which the injured player is suffering.

The Purpose of the Test
To measure the elasticity or the amount of expansion that occurs in the lumbar region.

Description of the Test
Determination of the point at the spinal incision of the fourth lumbar paragraph under which a distance of (5 cm) and another sign above it (10 cm) and ask the laboratory
to bend the body forward to the maximum position of the stand with not to bend the knees.

**Method of Recording**

The new distance between the two points is measured and the reading is recorded (the amount of flexibility).

**Test Bend the Trunk Forward from the Stand** [5]

**Purpose of the Test**

Measure the elasticity of the spine on the horizontal axis.

**Tools Used**

Without a seat back height (50 cm), flexible ruler is divided from (0- 100 cm) installed vertically on the seat so that the number (50) parallel to the surface of the seat and the number (100) parallel to the lower edge of the seat.

**Description Test**

Standing laboratory above the seat and feet with adduction installed with toes on the edge of the seat and keep knees outstretched and the laboratory bend the torso forward and down until tiptoes to the farthest distance possible to prove at the last distance up her for two seconds.

**Method of Recording**

Record the distance of the experiment in the experiments and calculate the largest distance by (cm).

**Testing the Lengthening of the Trunk Back from the Stand** [6]

**Purpose of the Test**

Measure the elasticity of the posterior trunk.

**Tools Used**

Tape measure

**Description of the Test**

To stand in front of the wall leave a distance (5 cm) bend the trunk to the maximum distance back and stability and then measure the distance from the wall to the chin with the subtraction (5 cm) of the distance left.

**Test the Bend of the Trunk to the Side** [7]

**Purpose of the Test**

Measure the lateral trunk elasticity.

**Description of the Test**

Stand the player to bend the trunk to one side and stability and then measured the distance between the big finger and the surface of the ground, and repeat the test to the other side.

**Pretests**

The researchers conducted the tests of the tribal sample of the research on Friday (27/1/2017) at 2 pm in the Youth Forum of Kufa / Najaf.

**The Main Experiment**

The researchers used EMS technique of body relax type, which is associated with simple muscular exercises for the purpose of relieving cramping, muscle contraction, pain relief, and rehabilitation of the muscles surrounding the lower back area.

The main experiment for the sample was started on Sunday, 29/1/2017 for 6 weeks By two sessions per week, the time of the session does not exceed 20 minutes, and thus the number of preparatory sessions implemented (12) session and the objectives of these sessions to the following:

- Increase relaxation of the muscles of the lower back area and thus increase the blood perfusion of those muscles
- Reduce abnormal muscle contractions that produce abnormal cramps for the lower back area.

These sessions were carried out by wearing a ten-pole electric jacket distributed over the large muscles in the trunk and through the body relax icon of the muscle relaxation.

The electrodes are increased by the electrodes on the back muscles after completing the simple stitching exercises accompanying the stimulation, then the muscles of the sides after lowering the level of current in the non-functioning muscles.

**Posttests**

The researchers conducted the posttests of the members of the research sample on Thursday (16/3/2017) at 4 pm in the forum of youth forum Kufa / Najaf and the same method of tribal testing.

**Results and Discussion**

View, Analyze, and Discuss Results
Table 2: Showing the values of the median, the spring deviation, the calculated value of the Wilcoxon, the level of indication of the level of pain, and the elasticity of the lower back muscles for pretest and posttest

<table>
<thead>
<tr>
<th>Tests</th>
<th>Pretest</th>
<th>Posttest</th>
<th>(u) calculate</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>Spring Deviation</td>
<td>Median</td>
<td>Spring Deviation</td>
</tr>
<tr>
<td>Pain grade</td>
<td>4.75</td>
<td>0.62</td>
<td>3.5</td>
<td>0.53</td>
</tr>
<tr>
<td>Bend the trunk forward</td>
<td>45.5</td>
<td>0.53</td>
<td>52.27</td>
<td>0.74</td>
</tr>
<tr>
<td>Stretching the trunk back</td>
<td>28.67</td>
<td>1.10</td>
<td>37.61</td>
<td>0.78</td>
</tr>
<tr>
<td>Bend the trunk to the right</td>
<td>46.30</td>
<td>0.58</td>
<td>48.7</td>
<td>0.42</td>
</tr>
<tr>
<td>Bend the trunk to the left hand</td>
<td>46.2</td>
<td>1.7</td>
<td>48.1</td>
<td>2.80</td>
</tr>
</tbody>
</table>

* Level of significance (0.05).

Table (2) shows that the nature of the subjects of the study sample showed significant differences between the tribal and remote tests in the degree of pain and elasticity of the trunk muscles to the front and back and to the right and left sides. The values of the variables were represented by the use of the Wilcoxon test for the interrelated samples to extract the differences, (3.64) and the level of significance (0.02), which is below the level of significance (0.05), indicating the existence of a significant difference between the pre-test and post-experimental group and for the benefit of the post-test in this variable and researchers believe that the reason for this development was the result of the use of electrical stimulation (body relax) Which in turn helped to alleviate the pain in the lower back area of the individuals of the research sample, while the variance of the trunk to the front, the calculated value (3.61) and the level of significance (0.02), less than the level of significance, indicating a significant difference between the tests. The mean variance of the torso of the right side has a calculated value of (3.05) and a level of significance (3.05). (0.04), which is the level of significance, indicating a significant difference between the test pre and post The variance of the trunk of the trunk to the left has a calculated value of (3.063) and a level of significance (0.027), which is less than the level of significance, indicating a significant difference between the tests of tribal and remote and for the benefit of the post-test.

Figure 2: Explain the values of the median, the spring deviation, the calculated value of the Wilcoxon, the level of indication of the level of pain, and the elasticity of the lower back muscles for pretest and posttest

The results of the search variables show that all the results showed significant differences between the pre-test and the post-test tests. The effect of the electrical stimulation of the body relax in the reduction of pain levels clearly, reduce muscle spasm resulting from Stress and repeated pressure on the muscles of the lower back due to the high load and weights raised and thus increase the player's ability to perform movements in this region without feeling pain or discomfort during physical performance as the pain factor causes the disruption of the work of functional muscles and affects the determination. There is a common relationship between pain and locomotors.
determination in the region. Therefore, it is normal that the motor ranges, the maximum force and the strength of the joint will improve due to low pain.[8]

**Conclusion**

The researchers concluded through their experience that:

- The electrical stimulation of the relaxation muscle (body relax) has a clear effect in reducing the level of pain for the members of the research sample clearly.
- Increase the range of motor trunk to the players of physical strength in the direction of the forward and backward and the right and left sides.
- The need to use EMS electrical stimulation training and especially lower back muscles for the occurrence of these injuries.

**References**