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Effect of Using Plasma Injection in the Treatment of Biceps Femoris Rupture of 110 Contraindications

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Abstract--- *The aim of study to use plasma injection for athletes with cramp rupture and tendon rupture of the biceps femoris muscle. The hypothesis of the research is the effect of plasma injection on the speed of healing of the muscle biceps femoris torn muscle. The research methodology consisted of using the experimental approach with two equal groups, while the research community represented a hostile 110 contraindications in Najaf. For the biceps femoris muscle and both according to the time of injury as after injury 72 hours is injected with the needles of this needle and once by the doctor and the specialist after the rehabilitation curriculum by a specialist in the rehabilitation team was conducted tests the same conditions for pre-test. The researchers used the statistical program of (SPSS) in extracting their results the most important conclusions reached by the researchers are:*

Low pain level early.

Increase the strength of the biceps muscle at a better level for the experimental group.

Keywords--- *Plasma Injection, Treatment and Biceps Femoris.*

I. INTRODUCTION

The development that has taken place at the training and therapeutic levels in the world came as a result of scientific studies programmed in accordance with the correct directions and the effective use of the results of research and studies that have a fundamental role in reaching scientific facts that contribute to the development of the level of treatment and rehabilitation of injured players and the rapid return of the player to Plasma injection therapy is an effective treatment in the treatment of physical injuries, wounds and joint injuries because of the availability of platelets rich in protein contribute effectively to the speed of healing and the speed of healing damaged tissues and physical therapy is important to complete medical treatments that contribute effectively in the treatment and rehabilitation of players ranging from physical therapies (ultrasound, infrared, electrical stimulation, etc.) and massage and cupping all these means contribute to the speedy recovery of injured players, each as needed, as natural remedies are part of Therapeutic program to complete the rehabilitation of the player and the speedy return to practicing sports activity. Hence the importance of research in the use of doses of local plasma injections for people with rupture of the biceps femoral muscle for athletes.[1]

Platelet Rich Plasma (PRP) is a modern technique used in the treatment of many medical conditions based on the separation of a sample of the patient's blood and then isolate this sample to obtain platelet-rich blood plasma (a

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concentrated source of autologous platelets), and then injected Places where treatment needs. They contain several growth factors and various other cytokines that stimulate tissue and bone healing.[2]

Muscles are the main engine of the human body so you need to build a proper muscle to suit the amount of force required, so when required to exert a high level of muscle rupture occurs to the player, especially biceps femoris muscle and hence the problem of research in how to recover the player after the injury and as soon as possible so The use of doses of topical plasma injections in the treatment of cramp injuries.

Research aims

1. The use of local plasma injections for patients with rupture of the biceps femoris muscle.
2. Recognize the effect of using plasma injections on muscle healing and pain relief.

Hypothesis

There is a positive impact on the speed of recovery and reduce the level of pain for people with cramp.

II. RESEARCH METHODOLOGY

The researchers used the experimental approach of the two equivalent groups as the most appropriate methods to solve the research problem.

Community and Research Sample

The research community was identified as athletes with muscle tear of the biceps femoris muscle in Najaf clubs.

Means of Gathering Information, Devices and Tools used in the Research

- Observation and experimentation.
- Testing and measurement.
- Medical syringes.
- Center Vogue.
- Sterile materials.
- Other medical devices.

Field Research Procedures

Select Search Tests

First, measure the level of pain according to muscle contraction: [3]

The pain level was measured through a pre-prepared form where pain can be measured according to certain contractions the patient is required to perform with the same muscle as the cramp.

Purpose of the test: To measure the level of pain of the injured player.

How to register: The level of pain is recorded by the player through the special form for this purpose and through the performance of some simple contractions of the muscle with muscle spasm or pressure on the place of injury and here the player registers the degree of pain felt by (1-10).

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Pre-test

The pre-test of the control and experimental samples was conducted 48 hours after the injury occurred in both according to the time of the injury.

Main Experience

The researchers carried out the main experiment on the experimental research sample where the muscle was injected with plasma (PRP), which is extracted plasma from the same blood of the injured and through the specialist doctor then isolate the plasma through special devices and materials and then local injection is done after (72) hours of injury and once after it begins the role Physical therapist and rehabilitation specialist the control group used medications and treatments prepared by the competence of rehabilitation and then work on the rehabilitation program of the control and experimental groups together.[4]

Posttest

After the completion of the qualifying program of the player and after the same conditions of the pre-test, the post-test of the research sample was conducted individually according to the time and program of the injured player.

III. RESULTS

Presentation, Analysis and Discussion of Pain Tests for Pre- and Post-tests of the Experimental Group

Table 1: The Mean, the Standard Deviation, the Calculated (t) Value and the Level of Significance of the Results of the Pain Score Tests are Shown

Researched variables	Units	Pretest		Posttest		(t) Calculated	Significant level	Statistical significance
		Mean	SD	Mean	SD			
The degree of pain by pressing the place of injury	Degree	6.3	0.94	2.25	0.5	5.74	0.01	Sig.
The degree of pain at muscle contraction	Degree	6.25	0.9	2.37	0.47	5.86	0.01	Sig.

Table (1) shows that there are differences between the results of the pre and post measurements of the experimental group in the variables studied. In favor of the post-test.

The variable degree of pain at muscle contraction was the value of the level of significance (0.01), which is less than the level of significance (0.05) was the difference was significant and in favor of the post-test as well. In the light of the results obtained by the researchers shows that plasma injection positively affected the healing of damaged tissues and thus alleviate the level of pain, as confirmed by the specialist in orthopedics and fractures.[5]

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Presentation of Variable Results of Pain Degree of Pressure on the Injury site and Muscle Contraction of the Affected Muscle of the Control Group

Table 2: The Mean, the Standard Deviation, the Calculated (t) Value and the Level of Significance of the Results of the Pain Score Tests are Shown

Researched variables	Units	Pretest		Posttest		(t) Calculated	Significant level	Statistical significance
		Mean	SD	Mean	SD			
The degree of pain by pressing the place of injury	Degree	6	0.81	3.25	0.5	5.74	0.01	Sig.
The degree of pain at muscle contraction	Degree	7	0.83	3.75	0.48	13	0.001	Non sig.

Table (2) shows that there are differences between the results of the pre- and post-test measurements of the control group in the variables studied, Significance (0.05) indicating a significant difference between the two tests and in favor of the post test.

Presentation, Analysis and Discussion of Pain Score Tests (posttest) for the Two Experimental Control Groups

Table 3: The Mean, Standard Deviation, the Calculated (t) Value and the Sig Value of the Test Results Show the Degree of Pain of the Experimental and Control Groups in the Post Tests

Researched variables	Units	Experimental group		Control group		(t) Calculated	Significant level	Statistical significance
		Mean	SD	Mean	SD			
The degree of pain by pressing the place of injury	Degree	3.25	0.5	2.25	0.45	2.82	0.03	Sig.
The degree of pain at muscle contraction	Degree	3.75	0.48	2.37	0.47	3.97	0.007	Sig.

Table (3) shows that there are differences between the results of the measurements (post - post) of the control and experimental groups in the variables studied. These are below the significance level (0.05) which indicates a significant difference between the two tests and in favor of the experimental group. Control t-plasma injection was not used as the plasma provide large amounts of blood platelets rich in protein and thus substantially contribute to the healing speed.[6]

Blood consists of a liquid (known as plasma) in which red and white blood cells and platelets swim. These platelets have a major role in treating injuries to the body. When an injury occurs, platelets start the process of blood clotting. Platelets also contain many proteins, called growth factors, which they secrete to help heal injuries. They help to grow new blood vessels and stimulate tissue healing.[7]They also attract stem cells to the site of injury and stimulate their division and activity. Stem cells are primitive cells that have the ability to divide and multiply to give different types of specialized cells such as cartilage and bone cells.[8]These stem cells are responsible for the

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regeneration of damaged cells, which leads to the self-production of new cells for the body and tissue regeneration.[9]

When an injury occurs in the human body, the body sends a quantity of platelets to the site of the injury to start the healing process and stimulate the cells there to repair what was corrupted.[10] So scientists thought of using a greater concentration of platelets in plasma to treat many injuries and diseases that the body took too long to recover from or was not fully recovering.[11]The use of platelet-rich plasma injections has led to a revolution in the treatment of many cases, affecting the joints and ligaments with great success without complications or side effects.[12]

IV. CONCLUSIONS

1. There is a clear effect of plasma injection on the speed of healing muscle rupture through clinical examinations of the patient.
2. The pain level is clearly reduced when moving and pressing the injury site.

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