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The effect of rehabilitation exercises with diversity of resistors and moving balance tools in rehabilitating rupture of the second type of muscles for the thigh of the soccer players

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Abstract

The aim of the research is to prepare rehabilitation with the diversity of resistors and moving balance tools for football players with rupture of the second type of muscles of the thigh, identifying the effect of qualifying exercises with the diversity of resistors and moving balance tools in developing the angle of dimensions out and the strength of the connective muscles of the interior and the level of pain for football players with a rupture of the second type of muscles of the thigh, Experimental design, the experimental and control groups, and the boundaries of the research community with football players who are injured by the Physiotherapy Division of the Baghdad Education Hospital in the Department of Medicine City, whose total number (17) were injured, and they are in nature from various popular clubs in Baghdad and they are ages between (17-19) years, of whom he was chosen for the research sample (16) injured (94.118 %) of their society. Then they divided into two equal number groups, and one of them was chosen as a livestock to be the experimental group, and the other is controlled, and the tests of the identical to recover from this injury were identified, and the preparation of (18) treatment sessions were applied by (3) sessions per week, and for a period of (6) weeks on the injured of the experimental group, and treatment of tribal and remote tests after the experiment ends with a system (SPSS) for the conclusions that the qualifying exercises with the diversity of resistors and moving balance tools are suitable for therapeutic sessions of the injured football players., And it has a positive effect in developing a force that includes the interior of the connective muscles of the thigh, and it has a positive impact on developing the dimensions of the dimensions outside of the connective muscles of the thigh, and it has a positive effect in reducing the level of pain degree V The

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connective of the thigh is for football players with a rupture of the second type, The recommendations were that it was necessary not to exaggerate the diversification between resistors and moving balance tools in therapeutic sessions of the luxury muscles of the thigh of the soccer players with rupture of the second type, and the level of pain degree V.A.S) must be adopted) and with caveats when the difficulties of the qualifying exercises for the rehabilitation of the connective muscles of the thigh for the soccer players with the rupture of the second type to preserve Muscle fiber from increased rupture in this affected muscle.

Keywords: rehabilitation exercises, balance tools, soccer players.

Introduction:

Adder muscle injuries in soccer players are among the most common field injuries in sports rehabilitation. Although sources vary in their percentage of the type and level of injuries due to this prevalence, it is necessary for it to receive the attention of researchers to help enable players to return to the field to practice their training and participate in matches. Although this injury is classified as a minor injury, neglecting it or continuing training while the player is injured can lead to dire consequences unless a complete recovery is ensured. (Al-Azawi & Kathom, 2012)

“As for the types of injuries that occur to players during training or sports competitions in local and international tournaments, for all reasons, injuries to ligaments, muscles, and tendons rank first among them) ”.Abdul-Kazem and Aboud, 2018, p. 37(

"In addition" ,due to the tremendous leap in the nature of technical performance and the enormous increase in training work that this requires, both in terms of intensity and volume, it was necessary for the coach to be aware of the physiological effects resulting from training loads on the players, in addition to paying attention to the elements of physical fitness, especially strength and flexibility, to ensure their positive effects on the players and avoid the negative effects that appear through the players' exposure to injuries) ".Shahata, 2006, p. 17)

“Statistics on sports injuries indicate that football injuries constitute 3.2% of all sports injuries, and they are distributed across various parts of the body as follows: head (10%), arm (7%), ribs (7%), rib cage (7%), thigh (18%), knee (25%), leg (9%), and ankle ”.(%17))Ehsan, 2015, p. 55)

Likewise" ,statistics in the field of sports rehabilitation indicate that adductor femoris muscle injuries constitute approximately 23% of the various muscle injuries in soccer players)".Gomez & Other, 2022, P: 4)

“The adductor muscles of the thigh are one of the basic groups working on the joint and are used according to their anatomical structure and the nature of their work in

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performing and executing many basic and derivative skills in football and hockey due to the strong and continuous support during training and competitions. Muscle tear injury to these muscles occurs in the muscle components, whether in the sac surrounding the muscle or in the muscle fibers (muscle belly), (Kadhim & Mousa, 2024) or in their effects. The adductor muscle tear injury often occurs in their tendons, especially the tendons of origin, as it is known that the blood supply to the tendons is less than in the muscle bellies. This, in addition to several other reasons, makes its treatment take a long time) "Abdel Nasser, 2004, 17)

"Poor balance, coordination and control of the lumbar flexors can have an impact due to the impact of their compression on the pelvis and the movement pattern of the thighs. Force imbalances between the hamstrings and the bilateral anterior thigh muscles also cause this type of injury, as well as a strength deficit only in the supporting hamstrings in the high-velocity phase. An uneven force balance or strength deficit can lead to a reduced number of contractile units in a chain) ".Sansonnet & ,Other, 2020, P: 436)

Also, one of the causes of injury to the adductor muscle of the thigh is when the muscle or muscles are exposed to a force or intensity greater than the strength of the muscles themselves .Increased exposure of the muscle or muscles to tearing in the event that it does not receive sufficient warm-up, increased strength of muscle contraction, especially in the muscles of this area, which leads to an increase in the speed of muscle work greater than its capacity, and then the occurrence of injury is The gathering bloody Clear around place Injury Especially after" Approximately (48) hours have passed ".)Rahma, 2016, p. 91)

"Poor eccentric muscle contractions in explosive phases of football such as acceleration, deceleration and change of direction may be associated with an increased risk of joint and muscle injury. As a result, training interventions are constantly evolving to address this problem. For example, adding pre-season strength training of the hamstring muscles through eccentric training brings significant benefits to elite footballers, both from the perspective of injury prevention and performance improvement) .Giacchino & Sestina, 2013, P: 59) & (Kzar & Kadhim, 2020)

"It is necessary to exploit the modifiable risk factors responsible for quadriceps injuries for the purpose of optimal return of the injured player, adopting them in rehabilitation programs to strengthen the muscles by eccentric contraction, and to increase neuromuscular control in an excellent way by means of lumbosacral stability, balance and coordination of the lower body and trunk, while paying attention to psychological and social factors. It is necessary to take into account the analysis of the athlete's activity in order to get as close as possible to the specificity of the playing position and his physical characteristics before the injury) ".Sansonnet & Other,2020, p. 22) & (Salman et al., 2022)

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The main symptoms of a thigh adductor muscle injury are pain in the injured part during rest and movement within the normal range of motion, pain when pressing on the injured site, swelling at the site of the injury due to bleeding, deformity at the site of the injury, instability of the injured part, the player's inability to walk or move normally, and a change in the skin color in the injured area. The worsening of the injury leads to muscle weakness or atrophy)..Suwaidan, 2018, p. 97)

Figure (1) shows the anatomical locations and the location of the pain of the adductor femoris muscle injury.

"Therefore, it is necessary to work on all limbs and muscle groups in football, as strength imbalances are a contributing factor in lower limb injuries. This is because players typically always use the same side of their lower limbs when kicking. This alters the strength balance between the legs and between opposing muscle groups. Players with strength imbalances are four to five times more likely to suffer a thigh muscle injury)".Buckthorpe, 2019, P: 7)

Also“ ,developing the condition of the muscles requires a lot of potential for exercise duration, repetitions, and intensity, and the more we master this accurately, the more we develop its physiological potential) ”.Abu Jameel, 2015, p. 145(

Therefore, the importance of addressing the rehabilitation of type II ruptures of the adductor muscles of the thigh in football players in this research lies in two important aspects, as follows:

Theoretical importance:

An attempt by the researcher to draw the attention of academic researchers in sports rehabilitation to the importance of trying rehabilitation exercises with various resistances and mobile balance tools to rehabilitate type II tears of the adductor femoris muscles to return football players to the field.

An attempt by the researcher to contribute to supporting theoretical and applied studies in sports rehabilitation for the benefit of those concerned with the importance of

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rehabilitating type II ruptures of the adductor muscles of the thigh in soccer players by experimenting with rehabilitation exercises with a variety of resistances and mobile balance tools.

Practical importance:

Providing rehabilitation exercises with a variety of resistance and balance tools to accelerate recovery and avoid the risk of aggravating type II hamstring tear in soccer players.

An attempt by the researcher to support the efforts of physical therapists in hospitals and increase their knowledge and capabilities regarding the importance of rehabilitation exercises with a variety of resistances and mobile balance tools.

This digression explains the injury under investigation, its causes, symptoms and the importance of addressing recovery methods. The research problem is determined by the researcher's observation of the delay in the return of football players who suffered from a partial tear of the second type of the adductor muscles of the thigh. After reviewing the physical therapy department at Baghdad Teaching Hospital and discussing with specialist doctors, it became clear that there is a need to try a variety of resistance and mobile balance tools and not to be satisfied with one repetitive movement or limited rehabilitation treatment methods at the same pace, so that rehabilitation through them goes hand in hand with the medical care provided by doctors and therapists, in an attempt by the researcher to answer the following research question:

Can the application of rehabilitation exercises with varied resistances and dynamic balance tools have a positive impact on the rehabilitation of type II hamstring tears in soccer players?

The aim of this research is to prepare a rehabilitation program with various resistances and dynamic balance tools for soccer players with type II ruptures of the adductor muscles of the thigh, and to identify the effect of rehabilitation exercises with various resistances and dynamic balance tools in developing the angle of the external dimensions, the strength of the internal adductor muscles, and the level of pain for soccer players with type II ruptures of the adductor muscles of the thigh. The researcher hypothesized that there are statistically significant differences between the results of the pre-post tests of the experimental and control research groups in the angle of the external dimensions, the strength of the internal adductor muscles, and the level of pain. There are statistically significant differences between the results of the post-tests between the experimental and control research groups in the angle of the external dimensions, the strength of the internal adductor muscles, and the level of pain.

Method and procedures:

According to the research problem, the researcher adopted the experimental method by designing the equivalent experimental and control groups. The boundaries of the

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research community were represented by football players who suffered from a second type of tear in the adductor muscles of the thigh and did not have inflammation or complications from the regular visitors of the Physical Therapy Department at Baghdad Teaching Hospital in the Medical City Department. They were procedurally limited to those who had been injured before (1-2) with this injury, whose number reached (17) injured, and they were naturally from various popular clubs in Baghdad, and their ages ranged between (17-19) years. The researcher deliberately chose them because of the availability of what indicates their achievement of the research purposes after excluding one player from them who had symptoms and double injuries, so that the research sample would be (16) injured, at a rate of (94.118%) of their original community. After taking written consents directly from them, they were divided into two groups of equal numbers according to the experimental design of the current research. One of them was chosen randomly to be the experimental group, with the number of injured in it (8) injured, and the other as a control group with a number of (8) injured.

The researcher also adopted the rehabilitation tests for type II tear of the adductor muscles of the thigh, based on the opinion of the consultant doctors at Baghdad Teaching Hospital, as follows: (Appendix 1)

Dynamometer test)Dynamometer(Attached to the lateral wall to measure the internal extension of the adductor femoris muscle after isolation of the accessory muscle groups, in (kg).

Device testGoniometer ((To measure the angle of abduction of the lateral part of the body, in units of (angle degrees.(

Pain score questionnaireV.A.S ((listed between (0-10) degrees when testing dimensions outwards.

Rehabilitation exercises were prepared with various resistances and moving balance tools and tested on the injured in the experimental group. As for the injured in the control group, they applied the training methods as they were without the researcher's intervention, and according to following the following steps:

The researcher identified the rehabilitation exercises with a variety of resistances and mobile balance tools after conducting many direct personal interviews with academic experts in sports rehabilitation, and then presented them to the consultant doctors at Baghdad Teaching Hospital so that their content includes commitment to the principle of diversification in the use of resistances and mobile balance tools, Appendix (2), with a focus on fixed exercises, stretching when the muscle contracts according to the degree of pain in determining the difficulty of each exercise, especially in exercises to support and support the body. To include standing on a mobile balance table, wearing relative weights at a rate of (5%) of the relative weight of the leg according to the (Bernstein) table, placed on the ankle joint and the movement is performed from the hip joint without bending at

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the knee joint, walking on pieces of foam in a specific path and line of (3-5) meters, standing on the healthy foot and moving the injured one while carrying the added weight, carrying dumbbells in the hands and raising and lowering the injured and healthy legs upwards from the hip joint alternately according to the degree of pain for the injured leg, leaning on the back on a Chinese medicine ball and the legs on two balance bases and pressing on them with the moving contraction alternately, and exchanging pressure with the legs from a standing position on half of the balance ball for each palm of the leg.

The duration of each exercise was (20) seconds, with a number of repetitions ranging from (10-15) times, and in groups of (1-3), with a rest interval of (1-3) minutes between one exercise and another, and the duration of one session ranged from (22-27) minutes, at a rate of (4) exercises for each one.

(3) rehabilitation sessions were applied per week, applied every other day of each week, for a period of (6) weeks without interruption or stoppage, under the supervision of specialist doctors, and the follow-up of the researcher.

All tests and rehabilitation exercises were supervised by specialists and consultants in the Physical Therapy Department of Baghdad Teaching Hospital.

The injury was minor, a type II simple injury, and the duration of treatment was determined to be one month, under the guidance of the consultant physicians at this hospital.

The research experiment began by applying pre-tests on the injured in the experimental and control research groups, numbering (16) injured, according to the requirements of the experimental design of the research experiment, after the researcher determined the tests that give an indication of similarity in recovery from a second type tear injury to the adductor muscles of the thigh, and completing the preparation of rehabilitation exercises with various resistances and mobile balance tools, as these tests were applied at exactly nine o'clock in the morning on Thursday corresponding to the date (6/6/2024) in the Physical Therapy Department of Baghdad Teaching Hospital.

Rehabilitation exercises were carried out with various resistances and mobile balance tools, with (18) rehabilitation sessions for the injured in the experimental group, numbering (8) injured, in the physical therapy department of Baghdad Teaching Hospital, for a period of (6) weeks, continuing from Sunday corresponding to the date (6/9/2024) until Thursday corresponding to the date.(2024/18/7)

After completing the rehabilitation exercises, post-tests were applied for the three dependent research variables that give a meaning or indication of similarity to healing from a type II tear of the adductor femoris muscles under the same pre-test conditions, on Sunday, July 21, 2024.

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The research experiment data was processed with the system) SPSS (To automatically check the percentage, mean, standard deviation, and test values).To live(For homogeneity of variance, test)t-test(For linked samples, test)t-test(For unrelated samples.

Results:

table (1) Shows the results of the pre-tests between the two research groups.

Variables	Group number		Statistical comparison between t unrelated groups						the differenc
			Q	+A	)The liv	)Say	)t(	)Say	
Inward contraction force (kg)	empiricisı	8	5.88	2.29	1.077	0.31	0.255	0.80	Not significa
	The office	8	6.13	1.55					
Abduction angle of the lat part of the body (angle degree	empiricisı	8	15	1.30	4.9	0.06	1.251	0.22	Not significa
	The office	8	16.1	2.16					
V.A.S) ((degree(	empiricisı	8	7.63	0.51	0.467	0.50	0.475	0.64	Not significa
	The office	8	7.5	0.53					

The statistical difference is not significant at)) Say(0.05)< at degree of freedom(14)and significance level(0.05)

table (2) Shows the results of the pre- and post-tests for both research groups.

Variables	Group number	compari	Correlative statist comparison for each group						the differen
			Q	+A	So	So	)t(	)Say	
Inward contraction force (k	empiricism	previous	5.88	2.29	25	2.26	31.18	0.00	Dal
		the next	30.8	0.99					
	The officer	previous	6.13	1.55	16.5	4.37	10.66	0.00	Dal
		the next	22.6	3.42					
Abduction angle of the lat part of the body (an degrees)	empiricism	previous	15	1.30	21.2	1.58	38.01	0.00	Dal
		the next	36.2	0.46					
	The officer	previous	16.1	2.16	15.7	3.61	12.32	0.00	Dal
		the next	31.8	2.29					
V.A.S) ((degree(	empiricism	previous	7.63	0.51	6.5	0.53	34.39	0.00	Dal

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		the next	1.13	0.35					
	The office	previous	7.5	0.51	4.37	1.18	10.41	0.00	Dal
		the next	3.13	1.12					

The statistical difference is significant at)) Say(0.05)> at degree of freedom(7)and significance level(0.05)

table (3) Shows the results of the post-tests between the two research groups.

Variables	Group number		Statistical comparison betw two unrelated groups				the differen
			Q	+A	)t(	)Say(	
Inward contraction force (kg)	empiricisr	8	30.88	0.991	6.553	0.000	Dal
	The office	8	22.63	3.42			
Abduction angle of the lateral p of the body (angle degrees)	empiricisr	8	36.25	0.463	5.285	0.000	Dal
	The office	8	31.88	2.295			
V.A.S) ((degree(	empiricisr	8	1.13	0.354	4.793	0.000	Dal
	The office	8	3.13	1.126			

The statistical difference is significant at)) Say (0.05)> at degree of freedom (14) and significance level(0.05)

Discussion:

The results of the pre- and post-statistical comparison of the injured members of the two research groups, as shown in Table (2), showed that all of them had developed positively in the post-arithmetic mean values for each of the angle of the outward dimensions, the strength of the inward contraction of the adductor muscles, and the level of pain compared to what their results were in the pre-tests. By reviewing the results of the post-statistical comparison between the injured members of the two research groups, as shown in Table (3), it is clear that the injured members of the experimental group who received rehabilitation with resistance diversity exercises and mobile balance tools outperformed the injured members of the control group. The researcher attributes the emergence of these results to the effectiveness of these rehabilitation exercises in targeting the developments required in the rehabilitation of this injury, in which the principle of diversity helped in the participation of the various adductor muscles in the mobile contraction movements to confront the burden of resistance on the one hand and maintain posture during movement in each exercise on the other, and the suitability of the duration of their application in conjunction with the therapeutic medical care provided by the physiotherapy department in the hospital, as these exercises were prepared completely

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devoid of personal efforts, in addition to their application in accordance with what was indicated by Specialized academic studies have been conducted to rehabilitate this injury, and the commitment to apply them according to its recommendations has helped the burden of movements by combining resistance with moving balance to help the muscles respond to confront this burden by gradually improving the contractile processes according to the degree of pain.V.A.S ,((and not putting pressure on the patient's ability to cope with the difficulty of each rehabilitation exercise, which led to an improvement in muscle function imposed by the instability in the dynamic balance exercises with rehabilitation resistance using both The mobile balance table, with relative weights of (5%) of the relative leg weight according to the Bernstein table and walking on pieces of foam, played an effective role in restoring function in muscle strength and enabling it to regain the position of extension and contraction, which appeared clearly in the increase in the level of the angle of abduction outward, standing on the healthy foot and moving the injured person while carrying the added weight, carrying dumbbells in the hands and raising and lowering the injured and healthy legs upwards from the hip joint alternately according to the degree of pain for the injured leg, leaning on the back on a Chinese medicine ball with the legs on two balance bases and pressing on them with the mobile contraction alternately, and exchanging pressure with the legs from the standing position on half of the balance ball for each palm of the leg, which together and the good distribution of their sequence in the application from easy to difficult in the application helped to show the result of this development and superiority in the results of the post-tests for the injured members of the experimental group who applied the rehabilitation exercises with various resistances and mobile balance tools.(Kadhim & Mahmood, 2023)

In a study that included a strength training protocol called the Adder Strengthening Program) ,ASP(This protocol was included 2-3 times per week during the pre-season period of (6-8) weeks) .Gomez & Other, 2022, P: 11)(Farhan et al., 2016)

Also" ,achievement conditions Implementation Resistance exercises that Be she has Functional benefits And moral And development For health And more power and hardness Bones and ligaments and fabric Link And it improves Function of joints And reduces Injury And it improves shape External For the body According to Why publish it ? medicine athlete American Van situation carry on muscles Structure and gradual in this Pregnancy become stronger ,And showed Studies show that training power Muscular and resistance Regular Leads to power And tighten muscles and tissues The Association And increase mass Bones and flexibility and acting Food In addition to aesthetics" The form ".)Faraj, 2011, p. 340) & (Kzar & Kadhim, 2020)

Because" when performing exercises for specific muscle groups, it results in adaptations in specific muscle areas) ".Abu Al-Rumi, 2018, p. 25)

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"Exposure to rehabilitation programs that train to develop muscle strength helps increase bone density, muscle size and strength, as well as the strength of ligaments and tendons. This improvement in internal structure is one of the best ways to avoid injuries ".)Abdul Maaboud, 2016, p. 66)

“Developing muscle condition requires a lot of potential for exercise duration, repetitions, and intensity. The more precisely we master this, the more we develop its physiological potential) ”.Abu Jameel 2015, 145-147)

“The amount of speed achieved in muscle contraction and the extent of muscle shortening are closely related to external loads, and the amount of shortening speed is at its maximum value when the external load reaches zero. After that, the speed begins to decrease with the increase of loads imposed on the contracting muscle. If the amount of external load reaches the maximum load that the muscle can bear, then the speed of muscle contraction is equal to zero, and the form of contraction here is observed as a constant contraction. However, if the load continues to increase to more than the maximum capacity of the muscle, then eccentric muscle contraction occurs) ”.Abdul Karim, 2010, p. 46)

Also" ,exercises Balance with exercise biliometrics and exercises power greatly affect in capacity to improve Mechanics Vitality For the parties" The lower one)".Clark & Other, 2012, P: 233-234)

As“ rehabilitation exercises, when applied continuously without breaks, can increase muscle elasticity to the desired levels if they are accompanied by stretching with resistances not exceeding (%50) of the patients' susceptibility, and with strict precautions when lengthening the muscle, and under the supervision of doctors to avoid aggravating the injury to the joint tendons, which are the sum of the muscle fiber membranes .)Yamada & Other, 2018, 195-204)

"Moving balance is one of the most important muscle strengthening exercises ". strengthening Muscular without Using weights as resistance on the body) the work of reinforcement without load) Thus, it is possible to develop muscle tension in the various muscles of the body with the aim of maintaining fitness. However, this stage of exercises cannot be applied in the early stages of rehabilitation) ”.Al-Shafi’i, 2024, 18)

“Exercises must take into account the rules of balance, both in performance and stability, and support the improvement of balance by relying on increasing the activation of the widespread muscle sensors, because the vestibular system does not develop with training, as it is like a scale that informs the brain about the body’s positions without issuing orders. This confirms that the role of the vestibular system is informative and not controlling, as is the prevailing idea, and it is possible to improve the effectiveness of its neurophysiological work, not develop its structures) ”.Arthur 2012, 151)

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"It can also be said that motor rehabilitation represents an effective treatment for balance disorders in general, and contributes to improving the physical condition and motor functions of individuals with injuries or medical conditions that affect balance and stability. With the development of modern motor rehabilitation techniques, better results can be achieved in the treatment and prevention of balance disorders. Numerous scientific studies have been found that indicate the effectiveness of motor rehabilitation in treating balance disorders. This effectiveness relies on stimulating the motor system to improve performance, motor coordination, and balance) ".Yahya, 2018, p. 118)

"There are basic goals for rehabilitation, the most important of which are reducing the degree of pain, improving the level of muscle strength, and restoring the joint's range of motion) ".Ayad, 2014, p. 124)

Considering that" we would be completely unable to coordinate our body movements without the sensors, which provide us with information about our muscles, the positions of our movements and our joints, the receptors for the nerve endings in the muscles, tendons and joints and the information coming from them give us the basis and sensation to make the movements coordinated, and cooperate with the vestibular sense (the sense of orientation or balance of the body))".Michael & Ronald, 2001, P: 305)

"Motor rehabilitation exercises can be simple and easy, or more challenging and require more experience and physical fitness. Overall, it can be said that motor rehabilitation is an important component in the treatment and prevention of balance disorders, and it can be used to improve the physical condition and overall health of individuals. It is recommended to speak with a doctor or sports trainer to design the most appropriate motor rehabilitation program for the individual suffering from body balance disorders) ".Sabbagh, 2019, pp. 87-92)

"Rehabilitation exercises designed to improve balance must rely on a direct measurement approach before they are designed to suit the specificity of each medical condition and the extent of their impact on muscle damage or damage to the physiology of balance, including the vestibular system and neuromuscular control. Time is often used to measure these conditions) ".Azmi, 2018, p. 144)

Conclusions:

1- Rehabilitation exercises with a variety of resistance and movable balance tools Suitable for treatment sessions for injured football players.
2- positive effect on developing the inward adductor strength of the thigh muscles in soccer players with type II ruptures..
3- balance tools has a positive effect on developing the external angle of the adductor muscles of the thigh in soccer players with type II ruptures..

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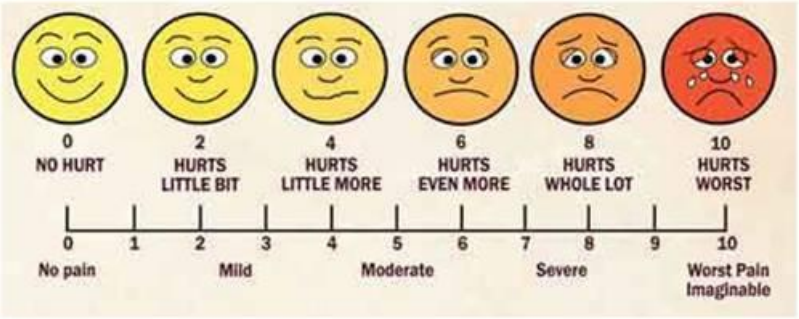
4- Applying rehabilitation exercises with various resistances and mobile balance tools has a positive effect in reducing the level of pain.V.A.S ((In the outward dimensional movement of the adductor muscles of the thigh in soccer players with type II tears.

Recommendations:

1- It is necessary not to over-diversify between resistances and moving balance tools inRehabilitation therapy sessionsThe adductor muscles of the thigh in soccer players with a type II tear.

2- The level of pain must be determined.V.A.S ((And with caution when avoiding the difficulties of rehabilitation exercises. Rehabilitation-relatedThe adductor muscles of the thigh for football players with type II tears to preserve muscle fibers from further tearing in this damaged muscle.

Appendix (1) shows pictures of the three research test methods.



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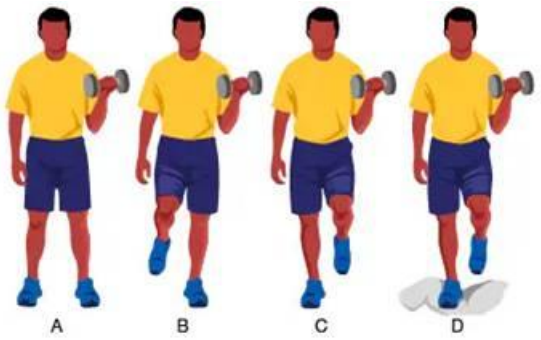
Appendix (2) shows pictures of rehabilitation exercise methods with various resistances and mobile balance tools.



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