THE EFFICIENCY OF THE COXARTHROSIS RECOVERY PROCESS BY IMPLEMENTING THE MASSAGE AND PHYSIOTHERAPY ASSOCIATED WITH KINETOTHERAPY

Eficientizarea procesului de recuperare a coxartrozei prin implementarea masajului și fizioterapei asociate cu kinetoterapia

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Abstract

Highly important for stillness and mobility, the hip joint is built in such a way as to offer the body maximum mobility and stability. That is why physical therapy, mental exercises, physiotherapy and massage are essential to the recovery of the joint.

The purpose of the study is to bring an improvement of the hip joint and to modify the cartilaginous tissue that causes the development of arthritis.

Methods. The tests were performed on a group of 10 patients within the Sf. Luca hospital. The recovery methods were established according to the muscular and articular balance.

The achieved results from physical therapy, physiotherapy and massage were compared in a graph that showed the initial state of the patients.

Conclusions. At the completion of the program an improvement of the pain and greater flexibility of the hip joint were observed. The muscles in the pelvis got stronger and, at the same time, the strength and mobility were progressively modified.

Also, the breathing and mental exercises had a very important role during the patient program.

Keywords: coxarthrosis, physiotherapy, massage, recovery, kinetotherapy.

Introduction

Coxarthrosis (coxo-femoral arthrosis) is the localization of degenerative rheumatism at the hip joint. (Cretu A. 2003)

This condition, characteristic of the third age, has the main causes of etiology the mechanical causes, expressed by excessive loading of the coxo-femoral joint during the lifting and transport of weights over the physiological tolerance of these structures of bone resistance, the increase of the mechanical tension at the level of the coxo joint femoral, congenital or acquired, and inflammatory, metabolic or infectious causes.

Etiology

The clinical picture of coxarthrosis is in the first algal, localized in the medial area of the inguinal fold, the origin of the pain being synovial reactions, with articular and cellular epansamenr, associated with chondrolysis episodes.

As primitive and secondary forms are described as primitive and secondary forms in which the first category is characterized by a functional embarrassment in walking, associated with progressive algal phenomena and reflex muscular contraction affecting the pelvitrochinteria muscles and adductors.

In the cases of primitive coxarthrosis, along with algal phenomena, degenerative phenomena in the coxo-femoral joint, which will associate the ankylosing form in the evolution of the disease, are included in its evolution. (Albu C-tin., Ambruster T.L., Albu M. 2012).

Primary coxarthrosis evolves in the absence of a detectable cause, embedding itself in a general degenerative arthrosis process, localized to the hip joint along with other localized joints (column, knee, etc.). It accounts for 45% of cases of coxarthrosis, which brings illness to the vicious attitude and mobility of limited movements, which gradually leads to disability. These conditions are bilateral and symmetrical as anatomical changes.

Secondary coxarthrosis (55% of cases) develops in conjunction with a preexisting condition that alters articular anatomy (co-femoral congenital dysplasia), affecting the femoral head joint or creating trauma, infection and other local destruction. Compared to primitive, bilateral secondary coxarthroses do not have symmetry in the radiological or symptomatological aspect, thus becoming unilateral.

The coxo-femoral joint is one of the most important joints. It is a solid and mobile articulation, made between two articular surfaces: the articular cavity, represented by the cochlea acetabulus, and the spherical surface, represented by the head of the femur. The hip joint is made up of the coxal bone (which together with the sacrum forms the pelvis) and the femur (thigh bone). The weight of the body is supported by this joint, fulfilling complex human functions, such as walking. This synovial joint has articular surfaces, ligaments, synovium, capsule, marginal spine, and in the coxal bone there is a cavity called cotiloid in which the head of the femur penetrates. The upper extremity of the femur has a head, the femoral shaft, and the neck or cervix that connects the femoral head to the bone. The head and the femur body form an open angle in which it normally measures 126 to 130 degrees. The development of atrophy is favored by any change in this angle as it increases cartilage demand. Coxo-femoral art is subjected to permanent pressure through the peri-articular muscular tone. It has been shown that while co-femoral aspiration suffers an intermittent pressure. Thus, while the weight of the body rests on one foot, the feser means exerts a strong, coxo-femoral pressure, alternately holding a pressure four times the weight of the body. In the coxa-valga, the big trohanter being too close to the center of the femoral head, the pressure supported by the femoral head at each step is 6-7 times greater than the weight of the body. In the case of healthy joints, pressure is transmitted throughout the femoral head, being well supported by cartilage. Whenever hyperpression is concentrated on a narrower area of the head, the cartilage is ulcerated.

Research objectives

- 1. Improving musculo-articular function;
- 2. Increasing articular mobility;
- 3. Increasing and adapting the body to effort;
- 4. Restoring muscle strength and increasing it.

Recovery methods

Physical therapy

For kinetotherapist, the program's orientation is based on the clinical-anatomic-functional stage of the disease.

Initial stage (SI): pain in orthostatic and prolonged walking, local musculo-articular fatigue, reduction of the "deluxe" aplitudine of the hip.

Evolved stage (SE): pain and rest, joint regurgitation in the current wear range, passive or even active vicious correctional attitudes.

Final stage (SF): intense pain, marked limitation of mobility to ankylosis, irreducible vicious attitudes.

The assessment of hip function is, of course, based on muscle and joint tests as well as global ones. (Sbenghe T. 1987).

Physical Therapy Program

From dorsal decubitus (to mattress or bed):

1. Turns at the calf, internal or external - 2 sets of 10 reps.

2. Simultaneous rotations with both legs - 2 sets of 10 reps.

3. Perform the return of the outer leg of the foot as close as possible to the ground - 2 series of 10 repeats.

4. Upper limb abduction - 2 series of 10 reps.

5. Flexion of the lower limb - 2 sets of 10 reps.

From ventral decubitus (to mattress or bed):

6. Extension of the member - 2 series of 10 repetitions.

7. The basin placed on a cylindrical pillow, the arms bent and the palms placed close to the shoulders, the knee is flexed at 90 degrees, the abduction and slow adduction of the calf - 2 sets of 10 reps.

- From the seat:
- 8. In the quadriceps seat 10 kg, 2 series of 10.
- 9. At the abductor seat 10/15 kg, 2 series of 10 reps.
- 10. At the adductor chair 10/15 kg, 2 sets of 10 reps.

Standing:

- 11. At the splinter, pick up the peaks 2 series of 10 reps.
- 12. In the spar, the abduction of the lower limb in the side 2 series of 10 reps.

Posture:

13. The patient supports his lower ankle member on a high surface, having the extended navel. We place a weight of 2kg. - 2.5 kg., At the calf. Swings of the lower meer - 2 series of 10 repetitions per member.

At the end - the bike - 7 minutes.

Physiotherapy

In the recovery of coxarthrosis physiotherapy is used, with procedures such as: ultrasound, short waves, diadinamic currents, laser, TENS, beneficial for relieving symptoms.

For antalgic purpose, ultrasound is also used whose action is maximally effective on algic and inflammatory periarticular manifestations that usually accompany coxarthrosis. Frequency of ultrasound commonly used in physiotherapy is 0.8-3 Mhz, but it can emit mechanical waves with a frequency greater than 20,000 Hz.

Ultrasounds can be used in a continuous field so the sensing receptors in the tegument record an ancestral sensation that increases proportionally to the intensity of fine stinging. (Lazarescu H, course)

Low Frequency Currents will have a frequency between 1-1000 Hz. These are obtained by interrupting the direct current by means of some adjustment methods, and an excitatory effect is obtained.

The effects of diadinamic currents are analgesic, hyperemic, long and short, dynamic, with 50 Hz attenuation threshold.

TENS is a non-traumatic way to combat acute and chronic algic syndrome, using rectangular and low frequency pulses.

Massage

In addition to the antalgic effect, the massage is also a miorelaxant. The massage maneuvers overcome the hip area down to the knees and climb to the vertebral column and address to all structures: skin, tissue, fascia, tendons and muscles. Muscular addressability massage will track the discovery of uncovered contracts during the palpation examination at the small and medium fesium and the broad fascia tensor; For this purpose, profound, slow-paced pressures will be used with a dose intensity based on the degree of patient tolerance (practice demonstrates that normally in about 12 'the right massage applied, the contracted muscles begin to relax).

Experiment

The experiment was conducted at St. Luca's Hospital in Bucharest, on a group of 20 patients aged 45-75 years old, men and women.

Over the control group of 10 patients (6 males and 4 females) physiotherapy and massage procedures were performed - 5 sessions per week.

The experimental group, comprising 10 patients (5 males and 5 females), besides physiotherapy and massage procedures, was also susps at 50-minute physical therapy sessions, as well as 5 sessions per week.

The purpose of the research

By following the principles and principles of kinetotarapia, an effective way of recovery of coxarthrosis is achieved, thus leading to a restoration of muscle strength, improved coordination, control and balance, increasing and adapting the body to effort, increasing joint mobility, and respiratory reeducation.

Physiotherapy, kinesiotherapy and massage were used as working methods in this research. Subjects were followed for 4 admissions, 14 days each.

Results

Table 1. Results obtained by the control group (previous abduction)

		WITNESS GF	ROUP		
Articular mobility (degree of abduction)					
Nr.	Patients	Before	After		
Crt.		Experiment	Experiment		
1	A.S.	15	15		
2	G.I.	18	18		
3	P.G.	20	20		
4	M.A.	35	35		
5	C.B.	28	28		
6	D.L.	45	45		
7	B.O.	43	43		
8	M.L.	40	40		
9	M.G.	60	60		
10	V.C.	58	58		



Fig.1. The graphical representation of the values obtained by the witness lot

Table 2.	The results	oblainea by in	е ехрептении	group	(precedents)	01	abauction)
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EAFERIMENTAL GROUP					
Articular mobility (degree of abduction)					
Nr.	Patients	Before	After		
Crt.		Experiment	Experiment		
1	M.S.	35	40		
2	P.V.	43	45		
3	G.A.	56	59		
4	C.V.	45	48		
5	O.C.	60	65		
6	D.V.	68	70		
7	D.D.	55	59		
8	B.A.	58	61		
9	V.A.	46	50		
10	F.V.	70	72		



Fig. 2. The graphical representation of the values obtained by the experimental lot

Observation: Abduction of the lower limb represents the removal of the thigh from the median line of the body. Active abduction progresses from 60 to 70 degrees and passive at 70 to 80 degrees. (Baciu C, 1977)



Fig.3 Representation of thigh abduction from lateral decubitus position.

Table. no. 3

Probe of control	Subjects	Initial testing	Final testing	
		M. arithmetic	M. arithmetic	
Abduction of the thigh	E	53,6	56,9	
	М	36,2	36.2	

Abduction of the thigh. In the initial testing, it was found that the arithmetic mean value in the experimental group was 53.6, while in the control group it was 36.2.

At final testing, the arithmetic mean of the experimental group reaches 56.9 while the mean in the control group reaches 36.2. It is noted that the experimental group recorded values that increased, expressed in improved thigh mobility.

Conclusions

Following the kinetotherapeutic program followed by the two lots, there was an increase in muscle strength, joint mobility, and with the help of physiotherapy and massage procedures, complementary to kinetotherapeutic procedures, pain was eliminated.

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