

RECOVERY OF THE PATIENT WITH SCAPULO-HUMERAL POLYARTHRITIS BY KINETIC MEANS

Benedek Florian

University "Ștefan cel Mare" of Suceava
florian.benedek@usm.ro

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Abstract

The research objectives are found below and refer to the examination, testing, application and recording of data. The study was carried out over a period of 3 months, where the patient, through the kinetic and akinetic means and methods used, led to the recording of considerable results that are recorded in the work. The results were carefully analyzed and compared with those from the initial testing to see the patient's progress.

This condition has recently become a real problem among people, in the vast majority of people of the second age are the most affected by this syndrome. The muscles are not sufficiently warmed up and prepared for the efforts we perform every day, the lack of training and physical activity is a real problem because most people subject their joints to certain shocks during movements, and the dysfunctionality of the shoulder and the pain present during movement and during the night it is not pleasant at all.[4]

Introduction

The shoulder joint is affected in scapulohumeral polyarthritis limiting most of its range of motion: flexion, extension, abduction, adduction, internal and external rotation. Patients with this condition have as their first symptom, the pain that occurs during the night or in the morning, after rest, accompanied by significant swelling and that improves with movement, characterizing an inflammatory process, while the pain that occurs after exertion and subsides at rest indicates a mechanical cause". [6,8] Patients who have an affected shoulder lose their mobility and the ability to do most of the ADLs, so recovery will be early and joint mobility exercises will be worked on.

The recovery of the shoulder will be early because the author Avramescu states in his course that "The shoulder is a little stable joint from the point of view of the bone shape and the strengthening means (capsule, ligaments). Stability is maintained by the play of these periarticular muscles. This play can become deranged, which is why the shoulder is often the seat of periarticular pain." [2,7,9,10]

As the authors Dragnea A., Teodorescu Silvia, Stănescu Monica state, the specific means of physical education are important tools that ensure progress in the

somato-functional and motor development of man.[2] The most important tool or means of physical education, a means borrowed from physical therapy, is physical exercise, another means of physical education is restoring the capacity for effort, and the third means is specialized apparatus and equipment. Each of these means has a complex and well-defined role, developing methodical thinking, new installations, high-performance devices, the assimilation and adoption of new knowledge and information from other scientific fields. [1,3,5]

Material-method

In this study, we started from the following hypothesis, namely from the fact that using the specific means of physical therapy, the recovery of a patient suffering from scapulo-humeral polyarthritis can be done.

The aim and objectives pursued in this study:

The purpose of this research is to understand the fact that physical therapy has become the most important form of recovery for the patient, and the therapist, by developing an exercise program and applying it through the methods and means found in physical therapy, can lead to better mobility and functionality of the shoulder among patients.

The objectives pursued in the work are:

- Studying specialized literature
- Proposal of kinetic methods and means in patient recovery
- Appreciation and application of the proposed tests
- Application of the recovery program
- Interpretation and comparison of initial and final results

Presentation of the case

Name and surname: C.P

Age: 48 years

Occupation: driver

Environment of origin: rural

Clinical diagnosis: Scapulo-humeral polyarthritis of the left shoulder

History: The patient in question presented with pain in the shoulder, pain that started for more than a few months. He said he could not perform certain movements because the mobility in the shoulder joint had decreased. The discomfort that occurred during work but also in carrying out certain daily activities and personal hygiene, motivated him to perform a specialist consultation, where the doctor, following the examination and the performance of other additional tests (medical analyses, x-rays), diagnosed him with polyarthritis of the scapula -humeral in the upper left limb, which will undergo a recovery program.

Place and conduct of the study:

The patient's treatment took place in the medical recovery clinic Trif Med, in the city of Fălticeni. The clinic provides patients with specialist consultation, along with physiotherapy treatments, as well as a specially equipped room for physical therapy. The medical devices, as well as the auxiliary materials, are adapted and classified according to the patient's needs in order to make the session go well. The physical therapy room is equipped with elastic bands, weights, trellis, pulleys, sticks, and other devices adapted to the patient's age and needs in the recovery program.

Period of performance:

The recovery program for the patient with scapulo-humeral polyarthritis was carried out over a period of 3 months, during which the patient benefited from the specialist consultation of a physical rehabilitation doctor, after which he recommended a treatment consisting of interspersed physiotherapy sessions and with currents but also with massage. We worked together with the patient every day, the session lasted 45 min, the patient being asked to perform some of the proposed exercises in his free time. This period was realized in the following stages:

- stage 1 (October-November) the first tests and data recording were carried out.
- stage 2 (November-December) the recovery program was put into practice, applying kinetic methods and techniques.
- stage 3 (December-January) the patient was reevaluated, the data being analyzed and compared with the initial ones, and the patient's recovery program was assessed.

Organization and conduct of the study

The three stages presented above took place over a period of three months as follows:

In the first stage, initial testing of the patient was performed on all degrees of movement of the shoulder joint. The instruments used were the centimeter and the goniometer, the measurement units being centimeters and degrees, and the data taken were recorded in the following tables as follows:

Initial evaluation of the somatoscopic examination

The subject in orthostatism, his posture was examined, then the examination of the affected limb was performed. He has a good body posture, but at the time of the examination of the upper limb he encountered several problems in performing the movements. When he was asked to perform the flexion movement, he performed an uncontrolled movement of limit as well as amplitude, compensating this movement with shoulder elevation. Extension, abduction and adduction movements were also tested, visualizing here also amplitude limitations and lack of rhythm in movement.

Objective examination:

Inspection\Palpation: the subject presented the following aspects:

- The shoulder muscles are hypotonic
- Contractions present in the involved muscles but also in the adjacent muscles
- Tenderness when palpated

- Local hyperemia present

Results and discussion

Table 1 Anthropometric measurements of the upper limb

Measure	Affected upper limb	Healthy upper limb
Arm circumference	39 cm	41 cm
Forearm circumference	29 cm	30 cm

In order to be able to fulfill the objectives of the work, which is to increase the mobility of the joint, we performed tests for joint and muscle balance in all areas of movement. The obtained values were entered in the following tables:

Table 2 Muscle balance - initial values

Motion	Valoare inițială
Curl	F2
Extension	F3
Abduction	F2
Adduction	F3
Internal rotation	F3
External rotation	F3

Table 3. Results of the proposed tests

Painful Bow Test	Pozitiv
Appley Test	Pozitiv
Gerber Test	Pozitiv

I performed the pain examination using the Vass scale, the patient was asked to assign a number on a scale from 0-10 to the pain felt when performing the movement. The Dash Scale is a questionnaire applied to people with upper limb dysfunction. The patient answers a number of questions and at the end he will be assigned a score based on the answers given. Our patient obtained a score of 33.3 after the test.

Reintegration of the patient socially and professionally

Following the problems in the upper limb, it was very difficult for the patient to carry out routine physical activities. From a professional point of view and the demanding work schedule, he had unbearable pain in his shoulder. At the beginning of the recovery program, he gave up these activities in order to recover, resuming

them as he healed. At the end of the sessions, he declared himself very satisfied because he was able to resume his activity.

The proposed program

The recovery program followed was the following:

Objectives of the program:

1. Preservation of function
2. Relief of joint pain and swelling
3. Increasing the range of motion
4. Regaining shoulder strength
5. Restoring the functionality of the affected shoulder

In order to prepare the body for the effort that is to be performed, we will perform in the first 5 minutes, massage techniques and slight mobilizations of the scapula to warm up and to promote blood circulation to the affected area.

Final evaluation after the application of the program

Following the application of this recuperative program, we applied the same tests again in order to see the progress made by the patient. At the end of the recuperative program, it recorded the following final values.

Table 4 Final values recorded - joint balance

Motion	Initial test values	Final test values	The difference
Curl	150 ⁰	180 ⁰	30 ⁰
Extension	35 ⁰	55 ⁰	20 ⁰
Abduction	150 ⁰	180 ⁰	30 ⁰
Adduction	30 ⁰	45 ⁰	15 ⁰
Internal rotation	60 ⁰	70 ⁰	10 ⁰
External rotation	50 ⁰	85 ⁰	35 ⁰

The patient stated that he felt a remarkable improvement in pain following the program. In order to confirm these, we again applied the pain test using the Vass scale and recorded the following remarkable differences between the values.

Table 6 Final recorded values – Vass Scale

Motion	Initial test values	Final test values	The difference
Curl	5	1	4
Extension	6	3	3
Abduction	4	2	2
Adduction	4	0	4

Internal rotation	2	0	2
External rotation	2	0	2

Social reintegration of the patient in the professional and family field

Carrying out activities related to personal hygiene, daily chores or the responsibilities related to the professional field carried out by a person, occupy a very important place in our development and belong to the good order of life. The difficulty our patient encountered in performing them demoralized him and did not make him come with confidence to call a specialist. After the appearance of the first results, his will increased and led to the resumption of all the activities where he encountered problems. The will and the desire not to be limited anymore helped him, and in this he has a greater motivation to continue and as time allows him to practice and practice the exercises so that he does not have to come back in this situation.

Presentation and interpretation of the data obtained from the research

Following the records and values belonging to the final testing, the following results were interpreted:

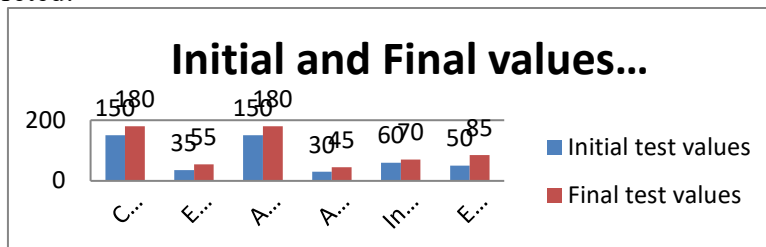


Chart 1 Graphical interpretation of joint balance

The patient came to us with a very low shoulder range of motion, which greatly hindered him from completing a task. During these three months, according to the graph above, he managed to increase these values. Initial testing represented in blue color is lower than final testing which is represented in red color. Values are considerably better and closer to normal following treatment.

In Chart 2 is the graphic representation of the muscle balance recorded by him. After studying it, a considerable growth and recovery of the patient's normal strength can be observed.

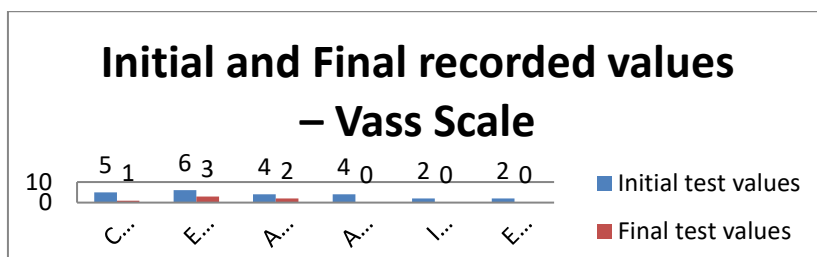


Chart 2 Graphical interpretation of muscle strength

We also tested the patient's anthropometric values, and the visible difference in these values is also recorded in the graph below. According to the graph, the initial testing recorded in blue had lower values than the final one represented by red.

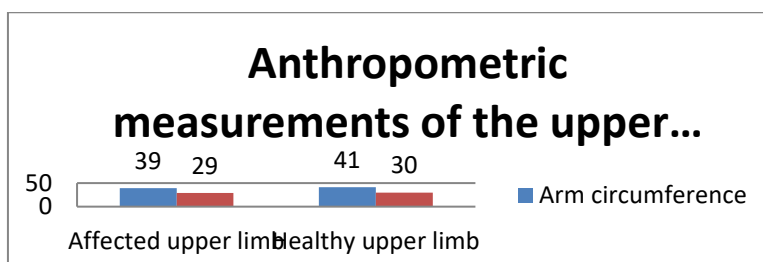


Chart 3 Muscle perimeters

Following anthropometric measurements on the arm and forearm at the beginning of the case study, the results represented in blue were recorded. A significant increase in these values can be observed following Graph 3 because the values represented by the red color are much higher than the other values.

Conclusions and proposals

After carrying out this case study, I deduced the following aspects: physical therapy is and will be the safest and most effective method of recovery for a patient who may suffer from some rheumatic or other problems. Recovery through movement is the safest way to recover physically, in the case in front at the beginning of the study we aimed to demonstrate that through the means and methods of physical therapy, the patient can recover to a large extent his lack of movement. This was confirmed by the tests and measurements carried out, but the most important feedback was given by the patient who declared himself pleasantly surprised that following the help provided throughout the recovery program, the pain improved and he was able to regain a great deal of ability and confidence in his member.

In conclusion, we can affirm the fact that the recovery of the patient who is suffering from a rheumatic disease, and more precisely the one who is diagnosed with scapulo-humeral polyarthritis, can be recovered with the help of the means belonging to physical therapy.

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