

THE EFFECTS OF KINETIC HERNIATED DISC SURGERY

Silviu Gabriel CIOROIU¹

Abstract: *Lumbar disc herniation is a condition with symptoms bipolar, which in most cases is pathognomonic diagnostic, especially when combined evolving periodicity, progressiveness and variability of symptoms, seizures back pain repeated that may be associated signs of neurological and psychiatric reactions different patient pain. Age maximum frequency is 30-45 years, and the ratio of male/female is 2\1. Usually 70% of hernias occur in those big physical efforts. In 95-98% of cases the hernia is located in the lumbar region and of these 50% are L4, L5 40%.*

In recent years, the global trend is to follow the patient and to use first all means kinetic known that may apply depending on the diagnosis and the type of hernia and use the surgical method only in cases where neurological signs are clear and when the other means of treatment were unsuccessful.

The kinetic treatment is instituted early in treating back pain so the results are better in the sense of improving the quality of life of patients and they do not have time to develop behavioral disorders induced pain.

Key words: *affection, kinetic means, treatment.*

1. Introduction

Herniated disc surgery especially the second stage, III and IV, often starts violently, with pain difficult to control. There are situations when the drugs do not help enough because they can practically alleviate pain, reduce inflammation and irritation, relax the muscles, but they do not drive the disc in its anatomical place, it does not balance or tone the muscles so as to make it a "belt "to keep the disc in its original place.

This is where the physical exercises take place, being the only means of balancing and fortifying the affected sector, placing it in the body as an equal, not as a "weak and powerless teammate".

The treatment of the hernia can be:

-conservative (classic and alternative medicine methods);

-steroidal (epidural injection) [3];

-surgery absolute indications are the forms which for three months do not respond to a correct conservative treatment (representing less than 1%), as well as the parasitic and those suspected of a tumor etiology [6].

Physical-kinetic treatment of patients with lumbar disc hernia recognizes two or even three stages: the first post-operative days (performed in clinics with qualified staff and using clinic methodology) after 4-6 weeks of surgery and a delayed stage dedicated to either secondary prophylactic kinetic or to the continuation of treatments

¹ Department of Physical Education and Special Motricity, Transilvania University of Braşov.

starting from the second stage and addressing possible complications or post-operative sequelae.

From the point of view of neurosurgeons, complications and sequelae are discussed, the differentiation between sequelae and the consequences of postoperative complications being very difficult.

A number of complications are not the subject of physical therapy, but it is good to know them: postoperative hematoma, superficial deep wound surgery, vertebral osteomyelitis. Others, on the other hand, benefit purely from physical-kinetic treatment, in some cases the only treatment to follow. These are: posterior cramp muscle cramp, postoperative root syndrome, passenger motor deficit.

Physically-kinetic, those patients with post-operative muscular cramps and post-operative root syndrome will be approached in the same manner as those with stage I stage III discoloration etiology, a sensory radicular syndrome without motor deficit. Particular attention will be paid to the psychosomatic aspect and as such we will use all the means of sedation available (fields of low frequency electromagnetic waves, radon ultrasonic therapy, general relaxation techniques, etc.). In cases of passenger motor deficit (postoperatively a partial neuro-motor deficit is strictly limited to the dissected root), physiotherapist's role is extremely important. It is up to him to determine the degree of denervation and, depending on it, to establish the appropriate recovery program. Obviously, this is not enough for the clinical examination even if it is complemented with an analytical muscle test, but requires a complex diagnostic. Of course, postural treatment, passive mobilizations, other thermo-, and electrotherapy procedures, massage, will be performed according to classic methodology in both situations. Chronic,

rebellious pain in the form of lumbar is the highest cause of temporal incapacity work after the surgical cure of a lumbar disc herniation. The secret of success lies in the individualization of the application methodology to the psycho-somatic peculiarities of the patient. One should never lose sight of the possibility of an iterative disc herniation or an intensification of root phenomena as a result of a discarded disk fragment in the foramen or the expression of an intraoperative "discarded" herniated disc, and more often, of an overly valuable operator or too late. Certainly, in order to elucidate these issues, close collaboration between the rehabilitator and the operator is necessary with exchange of information in both directions.

Motor deficiencies are most common in the external popliteal sciatic area and are manifested by paresis of varying intensity or even paralysis. Less common is sciatic internal popliteus. The attitude of the physiotherapist was presented, as a general orientation, when the passenger motor deficit was discussed. In addition, if a sufficient amount of contraction is not recovered at sufficient time (2 years) to ensure plantar dorsiflexion and eversion, during walking, the orientation of the recovery will be reconsidered and a wearing orthosis remedy this deficit.

This extends the investigation plan with examinations capable of giving more light to the diagnosis, determines whether it is useful or not to continue the physical-kinetic treatment and whether an intervention is appropriate. Unfortunately, no intervention can guarantee the problem, statistical data being not the most optimistic.

In the end, it's about chronic patients who are psychic, hurrying through various medical services, and they can't find their solution [2].

The hernia treatment differs depending on the phase of the patient. In the acute phase, nonsteroidal and anti-inflammatory drugs are generally administered. In the chronic case, the medication differs significantly as it goes to steroidal anti-inflammatory drugs, anticonvulsant medication calcium channel blockers antagonists. All these, drug arsenal are used when the patient suffers from chronic back pain that does not cure any other treatment but is used only in rare cases. Local infiltrations in soft paravertebral tissues or even intraarticular with anesthetics, anti-inflammatory, etc. can also be used. Although quite often used, they have been shown to be effective only at an early stage of treatment because they only make it easier for the patient to move to the physically-kinetic treatment center [7].

The kinetic program used for a hernia is very complex, depending on the phase of the patient. The objectives of this treatment also vary according to these phases.

In the acute phase, the following goals are taken into account: pain relief, bed mobility (sitting, lifting), muscle relaxation.

In the subacute phase the objectives of the kinetic program are as follows: maintenance of the general muscular tone and joint mobility strengthening of the inferior trunk muscles.

In the chronic phase, the following objectives are pursued: lumbar aspiration, toning of the weak muscles of the trunk.

The objectives of the complete remission phase are as follows: control of the right posture of the lumbar spine and the pelvis, the self-locking of the lumbosacral column, the holding or the increase of the muscular force [3].

Relaxation of the lumbar muscles is achieved by the hold-relax method or the Kabat method, depending on the phase of the patient and his ability to cooperate.

Acupuncture of the trunk muscles is most common in our country by the Williams method, with its three phases depending on the phase of the patient, but it should be taken into account that in the case of disc hernia.

2. The Williams Program

The Williams program is the most used in medical recovery rooms. For the first time, Dr. Paul Williams presented his program in 1937. This exercise program addressed people with lumbar spine and was based on the flexion movement of the lumbar spine because it was believed that this would lower the load to that level and therefore decrease and lumbar pain.

Toning weak trunk muscles is done using various exercises depending on the muscle groups to be trained, depending on the phase of the patient and the results he / she has obtained during muscle testing. The most accurate is to use individualized programs and not programs after printing [5].

The ultimate goal of a proper kinetotherapy program is to be the "back school" that teaches the patient how to avoid the recurrence of an algic fever by maintaining correct posts, using movements where the load on the lumbar spine is minimal, etc. This "back school" has proven to be extremely effective because a patient who understands what caused his illness will do everything in his power to avoid a recurrence of this condition.

Regardless of the type of treatment that the patient benefited from, non-surgical or surgical, the full treatment regimen never kinesitherapy. This is because all patients who received postoperative kinetic treatment had a much lower recovery time.

In the case of herniated discs laminectomy is most frequently used, the techniques used today in the world are

quite varied. Laparoscopic interventions are also used in which the herniated part of the intervertebral discs is cut and eliminated, where the herniated part is destroyed by the electrocautery, the laser, etc. Techniques vary depending on the country where the interventions are made and how much the patient or clinic can afford to spend and sincerely the financial aspect should be taken more into account with the development of the private health insurance system and in our country.

Phase I: (each exercise is repeated 3-5 times, the program repeats 2-3 times a day):



Fig.1. *The patient positioned in the dorsal decubitus position knees and extends the knees*



Fig.2. *The patient in the dorsal decubitus position pulls a knee on his chest, trying to touch his forehead, like the other knee*



Fig.3. *The patient is in the dorsal decubitus position, pulls his knees to his chest, trying to touch them with his forehead*



Fig.4. *The patient positioned in the dorsal decubitus position, with his hands under his head, pulls one knee to the chest as much as possible, then the other, then both concomitantly*

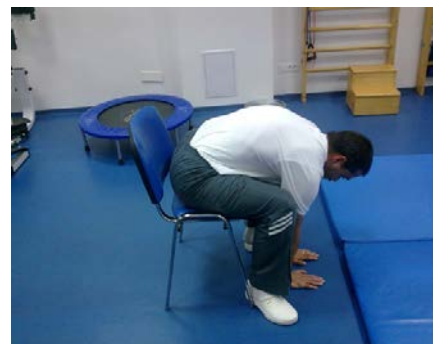


Fig.5. *Sitting on the chair with its far removed knees, leans forward with his hands so that he touches the ground beneath the chair; keep bending 4-5 seconds, repeat*

During the kinetic treatment, the patients began in the first two sessions with Phase I of the Williams program, continuing gradually with the addition of Phase II and III exercises. At the end of each treatment session, patients underwent breathing and relaxation exercises reaching the 10 days of treatment with dorsal muscular stretching.

Before the kinetic treatment (Williams), patients were evaluated for the mobility of the spine by centimeter measurements using the Schöber test.

The Schöber test evaluates the magnitude of the lumbar spine on the four floors of the scale. For this, from the thoracic apophysis of the sacral vertebra S1 is measured proximally 15 cm. After executing the torsion flexion movement, the distance between these points increases as follows: lumbar area 4-5 cm [1].

Table 1

The gender distribution of the batch was 5 women and 5 males aged between 28 and 52 years.

Age range (years)	no. women	no. men
21- 30	–	1
31- 40	3	2
41- 50	1	2
51- 60	1	–

Table 2

Schöber Test

Patient	Test Schöber
P 1	16-17 cm
P 2	16 cm
P 3	17-18 cm
P 4	16-17 cm
P 5	16 cm
P 6	16-17 cm
P 7	16-17 cm
P 8	16-17 cm
P 9	17-18 cm
P10	16-17 cm

Table 3

Motor deficiency

Patient	Motor deficiency initial	Motor deficiency final
P1	90°	90°
P2	70°	85°
P3	75°	85°
P4	90°	90°
P5	90°	90°
P6	90°	90°
P7	90°	90°
P8	90°	90°
P9	90°	90°
P10	70°	85°

The patients performed the same number of sessions -10- 20-30 minutes of the session, although the treatment interval was very short, almost insufficient for a total recovery, by its own treatment regimen applied, we sought to achieve a short time recovery parameters required for the lumbar spine mobility sector.

The difference after recovery to the motor deficit:

Table 4

Difference after recovery to motor deficiency

P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
-	15°	10°	-	-	-	-	-	-	15°

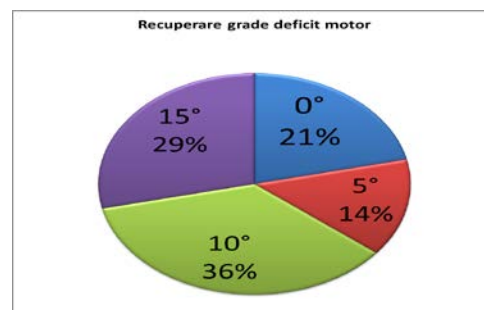


Fig.6. *Scheme of motor deficit recovery*

3. Discussion

The more physically-kinetic treatment is instituted earlier in the treatment of lumbar disease, the better the results are to improve the quality of life of the patients, and they have no time to develop pain-induced behavioral disorders.

Implementing "back school" programs reduces the chances of having a painful post-treatment pain.

The individual kinetic program based on the results of the muscular and articular test is more effective than the type applied only to the "diagnosis".

The patients felt the results and were convinced that this treatment is more effective followed for a longer treatment period.

Correction program design is the most important aspect in the therapeutic field with a deep scientific content based on a number of science especially physical education and sport [4].

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