

A New Treatment System for the Spine to be Tested in a health care center

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The effectiveness of treatment of ten patients suffering from different diseases of the spine and the musculo-skeletal system was observed at the health care center of the community association of central Karelia, using a hitherto unknown treatment system for the spine. The patients ranged from 41 to 76 years of age, partly working and partly in retirement. Spinal affections ranged from 10 to 40 years. The patients had in common that their individual surgical treatment, physiotherapy or any other aids were unable to relieve their suffering. The tested spinal treatment system was able to help part of the patients in a short time.

Spinal diseases are extremely frequent in Finland. They are the cause of many subjective complaints, economical losses and require extensive work in health care. Spinal patients keep returning to their physicians over and over again. In many cases rest, medication and physiotherapy bring only temporary relief from their complaints. Even early sickness retirement does not solve the problems.

This German spinal extension treatment system (Detensor) was tested successfully in many European countries, as in the Soviet Union and the USA. Orthopaedists and sports physicians are interested in this system. The most comprehensive clinical tests to date had been conducted by the department of orthopaedics at the Goldenbühl-Hospital, Villingen, FRG. More than 800 patients suffering from different spinal diseases were treated in the years 1982 to 1987. More than 80% of these experienced considerable relief of their complaints. Any contraindications for this system could not be found.

The Functional Principles of the Treatment System

The spinal treatment system consists of a specially designed mattress like „Detensor“ for sleep at night and a „Therapy-Mat“ of similar kind, for use at day time. The surface of the Detensor consists of elastic lamellae. A heart shaped lamella is located in the lumbar lordotic region from which the remaining lamellae are directed cranially and caudally. The patient reclining on the „Detensor“ deflects the lamellae by the body weight, causing a mild traction of the spine and the soft tissues of the back during several hours of sleep. The vertebral bodies of the spine reach an optimal physiological position improving the metabolism of disks. The traction force produced by the lamellae averages 5% of the body weight.

The traction force of the mat designated for use during daytime reaches up to 18% of body weight. It is recommended to use the mat 2-3 times daily for approximately 40 minutes duration each. The Detensor and the mat are available in three grades of hardness according to size and weight of the patient. A specific gymnastics program was developed to support this treatment system.

Test Subjects and Test Procedures

We tested the system at the health care center, knowingly without the use of a greater number of test subjects for the investigation. We were trying to determine in how far this treatment system may be useful to practicing physicians in the treatment of problem cases in diseases of the back and the musculo-skeletal system. Two spinal treatment systems were placed at our disposal by the inventor of this method Mr. Kurt Kienlein and were used for the clinical tests. We conducted these clinical tests on ten, mainly randomly selected problem cases in a period of 10 months. The test subjects were made up from seven males and three females ranging from 41-76 years. Six of which were able to work and four were in retirement. They were patients with chronic back pain or another symptom pertaining to a disease in the musculo-skeletal system having undergone physiatric (non-surgical orthopaedics, note of translator) examinations and treatments in the last 10-40 years. Also treatments by orthoses were attempted, however, without permanent help. One patient had undergone two surgeries and another declined the recommended surgery. The patients were examined at the beginning and at the end of the tests by a practicing physician and a therapy gymnast. The length of the test period was set at 6-10 weeks. The test subjects slept on the treatment Detensor during the night and used the treatment mat during the day according to the gymnastics program. Our aim was to allow the participant of this clinical test to otherwise lead a normal life. Other physical therapy was not administered during the test period. The test subjects were given precise written instructions for the application and conduct. Further, we controlled the correct positioning of the „Detensor“ and compliance with the instructions by means of house calls. We controlled the conduct of the tests by the patients visiting our practice and if required by telephone.

Results:

Nine test subjects used the treatment system according to plan. Several test subjects experienced an increase in spinal pain at the beginning of treatment, which however subsided after one week. One of the patients had to discontinue the test after five weeks because of the severity in recurring spinal pain. He underwent surgery for diskal prolapse. In two test subjects, spinal pain had vanished completely and the remainder judged the treatment to have been considerably useful. The clinical status revealed improvement in the mobility of the cervical and lumbar region, muscular tension decreased and the disappearance of stiffness of extensors at the hip joint was remarkable. When questioned some time after termination of the clinical tests, part of the test subjects reported the return of the previous complaints.

Patient History

The table lists abbreviated patient histories, without mentioning many interesting facts. Hereby presented, more concise patient histories of a few cases:

Patient No. 2: A 76 year old mentally alert female suffering from severe chronic back pain. 30 years ago, she fell from a high kitchen stool, hitting her coccyx on the back of a stool. Thereafter she was continually exposed to spinal pain. In 1988 the pain became so severe that she was unable to leave her bed for most of the time.

Radiography of the lumbar spine showed a severe osteoporosis and moderate scoliosis. L2 a wedge shape deformity due to fracture changing the lumbar lordosis to kyphosis. Further, ventral displacement of L3 to L2 by 4 mm, as well as ventral displacement of L4 to L3 by 5 mm. In April 1989, before the clinical tests, she experienced continuous back pain, neck pain (much manual labor) and severely affected gait capability. She was unable to cover the 300 m's for shopping. Already after one night she felt better having slept well. During the treatment period she was able to again walk to the shop. She canceled the already ordered physiotherapy, works busily in the garden and performs household chores. She uses the Detensor steadily and feels well.

Patient No. 3: A 53 year old farmer and carpenter. Suffering from back pain for already a considerable time period, having used up his eligibility for sick-leave he was denied further extension. In April 1989 suffering from severe pain forward bending of the spine was completely impossible and he also complained about loss of sleep. He telephoned after the first night of the clinical test, that his feet were comfortably warm, after having them feel ice cold for years. The back, however, according to his opinion remained without improvement. The treatment system, however, helped him in so far that he was again able to carry out the entire work for May on his tractor. At the final examination, the back was in a condition as severe as at the beginning of the clinical test but the work for May was done. The only positive reaction to note, that the feet had remained warm. Later he informed us that the condition of this back had become worse after having stopped using the treatment system, even without performing any more manual labor May: the patient was then admitted to the charity hospital for invalids, diagnosed with multiple lumbar disk degeneration, he finally received his sickness retirement pension.

Patient No. 10: A 63 years old female, suffering for 30 years from back pain. They were especially severe in 1971 at which time they radiated into the right leg. In 1972, the orthopaedist diagnosed a right ischial syndrome as well as a piriformis syndrome. At that time a spondylolysis and spondylolisthesis at L5 was determined radiologically. Thereafter, she received physiotherapy and took sick leave for several weeks every year. In 1976, her back pain become again very severe. The ensuing myelography was found normal. Again she received physiotherapy and continued her work on the land. Beginning the 80's, she developed asthma, for which she went into sickness retirement in 1984. Back pain continued as well as the radiating pain into the right leg. She received physiotherapy once to twice a year which brought temporary relief. An orthosis did not help, on the contrary, it increased back pain. Thus, she was forced to continually take analgesic medication. At the beginning of the clinical tests, she complained of continuous back pain radiating into her left leg. Mobility was impaired. Flexing the back, she was only able to reach half way to the lower leg with her hands. To erect, she had to support herself on the thighs. The left ATR (Achilles tendon reflex) was weak, tactile sensation in the dermatome region of L5 was weakened. Already 2 to 3 days after the beginning of the test for the „Detensor treatment“ all of the back pain had vanished and remained so during the entire duration of the treatment.

Considerations

These clinical tests performed with the spinal traction treatment system on problematic, mainly chronically affected test subjects were conducted under normal living conditions. The clinical evaluation of the tests are based mainly on the conventional patient-physician relationship of the practicing physician. We take the liberty of recommending this interesting method of treatment as research objective also to the finish physiatrists.

References

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Table

Patient	Male/Female Age/Profession	Symptoms	Diagnosis	Followed Instructions 1)	Result	Comment
1	M/41 yrs. commerce painter	Backpain	lumbar instabilities	well	satisfactory	returned to work
2	F/76 yrs. house wife	Backpain	osteoporosis vert. fracture L2	partly	very satisfactory	used mattress also after test
3	M/53 yrs. farmer	Backpain cold feet	multiple dege- nerative lumbar disk	partly	satisfactory	Feet remained warm
4	M/44 yrs. truck driver	Cervical & backpain also pain in gastocn.	radicular, extr. Inf. 1.dc. St. p. oper. dorsi II	partly	moderate satisfactory	loss of sleep alleviated
5	F/71 yrs. ret. worker	Backpain	chronic sacrolumbalgia	well	satisfactory	gait capability considerably improved, pain reduction
6	M/64 yrs. farmer	Cervical- shoulder- and backpain	cerv. spondyl- arthrosis, chr. sacrolumbalgia	well	satisfactory	shoulder Pain alleviated
7	M/48 yrs. teacher	Backpain noct. perspiration, snoring	chr. sacrolumbalgia	partly	satisfactory	cannot sleep supine, noct. perspiration reduced
8	M/48 yrs. auto mech.	Backpain	lumb. scoliosis st.p. fract. L4 degen. presacr. disks	well	moderate satisfactory	continued his work
9	M/49 yrs.	Chron. backpain radiating into both legs	spinal canal stenosis instability L3/L4	well	non- satisfactory	ceased treatment after 5 weeks
10	F/63 yrs. ret. farm wife	Chron. backpain radiating into both legs	spondylolysis spondylolisthesis L5	well	very satisfactory	completely free from pain

1) for instance, had not used therapy mat, no gymnastics, etc.

2) evaluation of therapy by patient