

Computer Kinesiology in the Field of Physiotherapy

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DESCRIPTION

In patients with low back pain who were not responding to conventional therapy, computer kinesiology was used in physiotherapy. Computer Kinesiology is largely used for the diagnosis and treatment of locomotor system functioning problems. Back pain has become a global epidemic in recent years. Back pain is often classified as acute, subacute, or chronic. Epidemiological studies, on the other hand, reveal that back pain is typically recurrent, intermittent, and episodic.

The goal of this study was to show that the diagnostic and therapeutic Medical Expert Information System Computer Kinesiology (MEIS CK) in physiotherapy can help individuals with low back pain who hasn't responded to other treatments. This was done on two groups of people: Patients with acute and chronic back pain and healthy people who didn't have back pain. It is the first study to assess the effectiveness of MEIS CK therapy in the treatment of low back pain.

This pilot study offers verification of the efficiency of the MEIS CK method in acute and chronic low back pain. Currently, Medical Expert Information System Computer Kinesiology (MEIS CK) seems to be a new and suitable therapeutic aid for the treatment of low back pain (described in our study) that is not responding to conventional therapy (e.g., hospitalization in departments like neurology, orthopedics, and rehabilitation; complex pharmacotherapy treatment; infusion therapy; local injection under CT control; contraindications for operations; and patient's preference of conservative treatment). This technique is primarily used to treat functional locomotor problems. Medical MEIS CK satisfies the EBM standards for motor apparatus diagnostics in a verified way. For a patient's auto therapy and individual workout, MEIS CK supports LBP NICE standards. The locomotor system's functions are evaluated via numerical outputs and graphs. The MEIS CK system's data collecting technique includes examining a patient largely under a postural load; however a portion of the lower limb evaluations is done in a supine position on a bed.

The diagnostics include a total of 50 standard physiotherapeutic tests (25 on the right and 25 on the left), including 8 active movements, 18 passive limb movements, and 20 soft tissue investigations (HAZ and trigger points) (for a more detailed description, see Materials and Methods). Exam results were manually entered into a computer programme as three grades, with each test receiving one grade (A=normal function; B=less than 40% dysfunction (slight dysfunction); or C=more than 40% dysfunction (severe dysfunction) (significant limitation of movement extent, wrong moving stereotype or inability to perform a movement, or significant changes in soft tissues). After entering all of the test results (n=50) into a computer, a mathematical model included in the Computer Kinesiology software programme processed them. The results of the analyses were represented numerically and graphically by the number of reflexes associated with a single spinal segment (the so-called horizontal concatenation of dysfunctions) and the movement of muscle chains at the same time (the so-called vertical concatenation of dysfunctions). The MEIS CK system proposes manual correction (massage-performed by a skilled physiotherapist) and an individual mix of daily home exercises for the patient based on the diagnostic component output.

CONCLUSION

We focused on the utilisation of Medical Expert Information System Computer Kinesiology to treat acute and chronic back pain in this study. Prior to the start of our therapy, patients with back pain had not responded to conventional treatment. In addition to the group of patients who had physiotherapy, a group of patients who were not in pain received CK therapy. Based on our findings, we believe that Medical Expert Information System Computer Kinesiology could be a useful diagnostic tool for functional problems, complementing existing visualization methods such as X-ray, CT, MRI, and other tests.

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