

Presented at the Annual Conference of the Austrian Society for Physical Medicine and Rehabilitation

"Using Magnetic Fields to Increase Flexibility and Reduce Pain with Respect to Ailments of the Ambulatory Apparatus."

Author: Dr. Jozse Barovic

Co-Authors: Dr. G. Fischer, Dr. Z. Turk, Dr. W. Kobinger

Study conducted at Marburg Teaching Hospital, Drau (Slovakia) and the Institute of Hygiene, Graz University (Austria), 1995

Between 01/02/95 and 01/09/95, 23 female and 23 male patients suffering from ailments of their ambulatory and sustentacular apparatus, were treated with a new magnetic field device, QRS, in two research phases. The patients had not been surgically treated for their ailments.

The patients (Ave age: 51.0 +/- 1 15.la) were suffering from intervertebral disc prolapse (n=25, diagnosed via myclography), spinal stenosis (n=18, diagnosed on basis of CT), and osteoporosis (n=2, diagnosis using densiometry). There was also one patient with spinal stenosis and osteoporosis (See 3. Paragraph 1).

The subjects were treated in 20 sessions (8 minutes twice daily - once in the morning and once in the afternoon) over a two-week period (Mon-Fri) on a mattress-like application mat (3 pairs of reels for neck, trunk and legs) using the maximum field-level setting on the device (Bmax = 4 mt).

Success of the therapy was evaluated using a 10-point Dole scale and (only in the first phase of the experimental tests n = 28) comparing a measurement of the distance between the finger tips and the floor while the patients were bending forward - both prior to, and following, treatment. Evaluation of the subjective pain experienced by the subjects was carried out using the preliminary non-parametric maximum, sequential range, and semi-qualitative Chi2 tests. Due to organizational reasons, flexibility was only measured in the first experimental phase and was evaluated by using the two-tailed V-Test for unequal variances (parametric test).

The results of the individual pain assessments accrued, using the 3 (non) parametric tests, showed the following results with respect to the overall group (3 paragraph 2):

Using the sequential range test there was already a significant result after 8 of the 46 Improvements ($p < 0.05$). The exact level of error could not be determined due to methodological reasons. The maximum test showed a highly significant reduction in pain ($p < 0.001$) after computing only the 11 largest Dole scale differences.

As before, it was not possible to determine the exact probability of error. Proceeding on the null hypothesis of an equal distribution of improvement / worsening of the perception of pain following.

The application of the magnetic field treatment the results of the Chi2 test ($p < 0.001$) were highly significant in favor of the positive effect of the magnetic field treatment.

Although only measured in 28 patients, due to organizational reasons, the increased flexibility in bending forward was also highly significant ($p < 0.0001$) (see 3 paragraph 2).

The results presented in both categories reflect those indicated in international literature.

Further cases are currently being statistically substantiated.

Publication Article

Medizinisch-Orthopadische Technik (Medical- Orthopedic Techniques)
"Conservative Treatment of 240 Patients with Magnetic Field Therapy"

March/April 1976, Issue 2, page 78
By M. Schroter

Summary:

Magnetic field therapy (MFT) is a clear therapeutic gain in conservatively oriented therapeutics. By no means does it constitute an alternative solution to other forms of therapy, but it has become an established component in the entire treatment spectrum of orthopedics. The indications and results are presented briefly.

The following data relate to a group of 240 patients treated with magnetic field therapy in a conservative orthopedic practice. Any secondary treatment by medication was dropped in 90% of the cases treated with MFT in order not to obscure the therapeutic success, if any. However, in two of Morbus Bechterew's cases, aged 24 and 27, Indometacin was applied. After about 50 sessions of MFT, we discontinued the medication, following gradual reduction, over time, of the daily dose.