E-Poster

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Effect of Low-Frequency Magnetic Field Stimulation on Physical Performance and Inflammatory and Oxidative Stress Markers in Post-Stroke Patients

Topic: Physical Modalities

Katarzyna Hojan, Renata Marchewka, Tomasz Trzmiel

Department of Occupational Therapy, Poznań University of Medical Sciences, Ponan, Poland

BACKGROUND

Stroke is a major public health concern, responsible for high mortality and long-term disability rates. Rehabilitation techniques aim to harness neuroplasticity—brain self-repair mechanisms that restore lost functions. Beyond traditional methods, therapies like Repetitive Transcranial Magnetic Stimulation (rTMS) and Extremely Low-Frequency Magnetic Fields (ELF-MFs) show promise in enhancing neuroplasticity. This study explored the feasibility and safety of ELF-MFs in stroke rehabilitation.

METHODS

The study involved 44 patients randomized into three groups: magnetotherapy applied to the head (MT1), pelvis (MT2), or standard rehabilitation (control). Assessments included functional measures (FIM, Barthel Index, Tinetti Scale, SPPB, and Berg Balance Scale) and inflammatory markers (CRP, PCT).

RESULTS

All groups showed functional improvement, with CRP and PCT reductions highlighting potential benefits of ELF-MFs. No adverse effects or changes in blood or organ function were observed.

CONCLUSION

Extremely Low-Frequency Magnetic Fields could be safely conducted in stroke patients group. The study confirmed that magnetotherapy applied to the head is safe for patients with ischemic stroke and mild to moderate functional impairments. However, it is important to emphasize that basic safety precautions should always be followed during treatment.

Statement of Disclosures

None

Corresponding Author:
Katarzyna Hojan
Department of Occupational Therapy, Poznań University of Medical Sciences, Ponan, Poland
Email: khojan@op.pl

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