DOI.10.7860/JCDR/2026/90859.24087 Abstract No.: PT 40

Effect of Pulsed Electromagnetic Field Therapy in Racquet Players with Lateral Epicondylitis

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ABSTRACT

Introduction: Lateral epicondylitis is a common overuse injury among racquet sports players, causing pain and a reduction in range of motion. Pulsed Electromagnetic Field (PEMF) therapy may help to reduce inflammation and promote tissue healing; however, sport-specific evidence remains limited.

Aim: To evaluate the effects of PEMF therapy on pain and range of motion in racquet players with lateral epicondylitis.

Materials and Methods: Sixty-eight racquet sports players aged 18-35 years with clinically diagnosed lateral epicondylitis were randomly assigned to a Control group (n=34) receiving conventional physiotherapy and an experimental group (n=34) receiving PEMF therapy (MAG-30, intensity-30 mT, time period-15 minutes) along with conventional physiotherapy. Both groups received intervention, 5 sessions per week for 4 weeks. Outcome measures included pain using the Visual Analogue Scale (VAS) and the range of motion of the wrist joint using a goniometer, respectively. Pre- and post-intervention data were analysed and presented as mean±SD and significance was set as (p=0.0001).

Results: Baseline values were comparable between groups. Following four weeks of intervention, pain levels decreased more in the experimental group (6.44±1.02 to 2.44±0.66) compared to the control group (6.44±1.08 to 3.35±0.73). Range of motion outcome also shows better improvement in the experimental group (Wrist flexion-46.68±2.07 to 71.00±2.40) as compared to the control group (Wrist flexion-46.65±2.03 to 67.59±1.81) and also shows better improvement in the experimental group (Wrist extension- 55.12±2.23 to 76.00±3.12) as compared to the control group (54.94±1.89 to 71.88±2.33). No adverse events were reported.

Conclusion: This study suggests that PEMF therapy is a safe and effective adjunct to conventional physiotherapy for reducing pain and increasing range of motion in racquet players with lateral epicondylitis. The findings support the need for larger randomised controlled trials to confirm their clinical efficacy.

Keywords: Joint flexibility, Pain, Racquet sports, Tennis elbows.

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