

## Effect of Pulsed Low Frequency Magnetic Field on Balance and Ankle Function in Patients with Juvenile Rheumatoid Arthritis

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**Abstract:** *Background,* juvenile rheumatoid arthritis is a significant public health problem that frequently restricts patients' activity with a major impact on the ankle joint stability and function. Magnetic field is recently used treatment options for joint arthritis. The purpose of this study is to investigate the efficacy of pulsed magnetic field on stability of the ankle joint in children with juvenile rheumatoid arthritis. *Subjects,* 30 patients with juvenile rheumatoid arthritis (13boys, 17girls), aged from (8-12) years were randomly assigned into two groups: group A(control group) received conservative physical therapy program & group B (magnetic field group) received the same program in addition to pulsed magnetic field. The program was applied 3 times/week for eight weeks. The main outcomes were ankle joint stability [in the form of: overall stability index (OSI), medial/lateral stability index (MLSI), anterior/posterior stability index (APSI)], ankle joint Range of motion and foot functional disability. *Results,* Patients in magnetic field group showed a significant improvement in the ankle stability, range of motion and reduction in foot functional disability than patients in the control group. *Conclusion,* Pulsed magnetic field may be an effective in increasing ankle joint stability, range of motion and reducing foot disability in patients with juvenile rheumatoid arthritis.

**Key words:** Pulsed Magnetic Field • Balance • Ankle Function • Juvenile Rheumatoid Arthritis

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