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Shock wave therapy effectiveness in treating patients with heel pain: a randomized control trial

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Introduction: Shockwave therapy is increasingly used for plantar fasciitis, but limited evidence supports its use. In spite of plantar heel pain being so common in the population, a growing body of evidence indicates that various methods and modalities applied by physiotherapists to relieve the symptoms of plantar heel pain lack quality validating research and therefore, not evidence-based. The purpose of this study is to determine the clinical effectiveness of shock wave in the treatment of chronic patient with plantar heel pain in term of pain intensity and function level, to measure any changes in pain level before and immediately after the treatment and to compare the effectiveness of shock wave therapy with other regular modalities in physiotherapy.

Methods: Randomized controlled trial (RCT) with 90 patients with plantar heel pain was selected from the general public in the same order that they presented in the Physiotherapy Department at Ahmed Ali Kanoo Health Center. Patients were randomly assigned into three groups: Group A - shockwave therapy group - using Piezoson 100 at each session, 2000 shots (0.12-.051 mJ/mm², 50Hz) of shock waves and exercise. Group B - conservative treatment group includes wax therapy and exercise. Group C - routine care with exercise only. The foot and ankle ability measure (FAAM) were used to measure function and the visual analogue scale (VAS) to measure the pain intensity.

Results: Pain intensity data group A (shock wave and exercise) was no immediate reduction. The mean value of pain intensity was calculated as 7/10 pre intervention. The mean value of pain intensity was calculated as 3.3/10 post intervention. Pain intensity data for group B (Wax & Exercise) was no change in pain within the same session. The mean value of pain intensity was calculated as 6.5/10 pre intervention. The mean value of pain intensity was calculated as 5.2/10 post intervention. Pain intensity data for group C (exercise only) was an immediate reduction, but not lasting for next session. The mean value of pain intensity was calculated as 6.3/10 pre intervention. The mean value of pain intensity was calculated as 4.2/10 post intervention. Function has been improved by 80% with group A, 65% with group B and 33% with group C.

Discussion: The study demonstrated the clinical and statistical efficacy of shock wave therapy in the treatment of chronic patients with plantar heel pain in term of pain and function. In comparison to other physiotherapy modalities, shock wave therapy has been proven its effectiveness with other regular modalities in physiotherapy.

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