
SYSTEMATIC REVIEW ULTRASONOGRAPHY, AN EFFECTIVE TOOL IN DIAGNOSING PLANTAR FASCIITIS: A SYSTEMATIC REVIEW OF DIAGNOSTIC TRIALS

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ABSTRACT

Background: Plantar fasciitis (PF) is the most common cause of heel pain that affects 10% of the general population, whether living an athletic or sedentary lifestyle. The most frequent mechanism of injury is an inflammatory response that is caused by repetitive micro trauma. Many techniques are available to diagnose PF, including the use of ultrasonography (US).

Purpose: The purpose of this study is to systematically review and appraise previously published articles published between the years 2000 and 2015 that evaluated the effectiveness of using US in the process of diagnosing PF, as compared to alternative diagnostic methods.

Methods: A total of eight databases were searched to systematically review scholarly (peer reviewed) diagnostic and intervention articles pertaining to the ability of US to diagnose PF.

Results: Using specific key words the preliminary search yielded 264 articles, 10 of which were deemed relevant for inclusion in the study. Two raters independently scored each article using the 15 point modified QUADAS scale.

Discussion: Six studies compared the diagnostic efficacy of US to another diagnostic technique to diagnose PF, and four studies focused on comparing baseline assessment of plantar fascia before subsequent intervention. The most notable US outcomes measured were plantar fascia thickness, enthesopathy, and hypoechoogenicity.

Conclusion: US was found to be accurate and reliable compared to alternative reference standards like MRI in the diagnosis of PF. The general advantages of US (e.g. cost efficient, ease of administration, non-invasive, limited contraindications) make it a superior diagnostic modality in the diagnosis of PF. US should be considered in rehabilitation clinics to effectively diagnose PF and to accurately monitor improvement in the disease process following rehabilitation interventions.

Level of Evidence: 1A

Keywords: plantar fascia, plantar fasciitis, ultrasound

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