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The Effectiveness of Shockwave Therapy in Diabetic Neuropathy Patients: A Narrative Review

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ABSTRACT

Diabetic neuropathy is a common and debilitating complication of diabetes, often resulting in chronic pain, sensory disturbances and functional impairments. Traditional pharmacological treatments offer limited effectiveness, leading to the exploration of alternative therapies like shockwave therapy. Shockwave therapy is a noninvasive treatment that utilises acoustic waves to promote tissue healing, reduce pain, and improve nerve function. This review aimed to assess the effectiveness of shockwave therapy in improving pain, nerve function, and quality of life in patients with diabetic neuropathy. A systematic search was performed using PubMed, Scopus, Cochrane and Google Scholar databases for studies published between 2014-2024. Boolean operators such as “AND” and “OR” were used in search strategy as “shockwave therapy” AND “diabetic neuropathy” OR “diabetic nerve damage” AND “pain” OR “quality of life”. The inclusion criteria focussed on randomised controlled trial involving shockwave therapy assessed in relation to pain reduction, nerve function improvement and overall quality of life. Out of 4,500 studies screened, 6 studies met the inclusion criteria. These studies revealed that shockwave therapy significantly reduced pain intensity (measured via the visual analogue scale). Improved nerve conduction velocity, and enhanced functional outcomes. Patients also experienced improved quality of life, as reflected in standardised quality of life assessments such as SF-36.Shockwave therapy demonstrated significant potential as an adjustive treatment for diabetic neuropathy, with notable effects on pain reduction, nerve function, overall quality of life.

Keywords: Nerve conduction, Nerve function, Pain reduction, Quality of life.