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Clinical evaluation of the efficacy of focused extracorporeal shock-wave therapy in patients with cervical spondylosis: A randomized control trial

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Abstract

Background: Extracorporeal shock wave therapy (ESWT) has emerged as a contemporary modality in physiotherapy, demonstrating efficacy in addressing musculoskeletal disorders. Despite its potential, the clinical efficacy of ESWT in the context of cervical spondylosis remains understudied, with a dearth of robust empirical evidence. To bridge this gap, the present study was designed to evaluate the therapeutic impact of focused ESWT (fESWT) on pain alleviation and functional improvement in individuals afflicted with cervical spondylosis.

Method: A multicenter, randomized controlled clinical study was conducted, collecting data from 5 clinical studies on the treatment of cervical spondylosis with fESWT from June 2021 to March 2024. The inclusion criteria were patients diagnosed with cervical spondylosis, aged 20 to 70, without severe underlying diseases such as heart disease, hypertension, diabetes, etc. The exclusion criteria included pregnant women, nursing women, patients with bleeding tendencies, or those with cardiac pacemakers. The control group underwent a sham fESWT, while the experimental group received fESWT administered via the Duolith SD1 Tower device. The main observation indicators included the Visual Analogue Scale (VAS) for pain scoring, Neck Disability Index (NDI) scoring, cervical range of motion (ROM) scoring, and the Short Form-36 (SF-36) quality of life survey scoring.

Results: A total of 320 subjects were included in the study, with 160 in the experimental group and 160 in the control group. Post-treatment, the VAS and NDI scores in the experimental group were significantly lower than those in the control group ($P < .05$), while the cervical range of motion (ROM) and SF-36 scores were significantly higher than in the control group ($P < .05$). The overall treatment efficacy rate in the experimental group exceeded 90%, markedly higher than the approximately 70% rate in the control group ($P < .05$). There was no significant difference in the incidence of adverse reactions between the 2 groups.

Conclusion: The fESWT has shown promising therapeutic effects in the treatment of cervical spondylosis. It effectively reduces patient pain, improves cervical function, and enhances the quality of life, making it worthy of clinical promotion and application.