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Cochrane Central Register of Controlled Trials

Comparative study of dry needling under ultrasound guidance and extracorporeal shock wave therapy for myofascial pain and spasticity management

Embase

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Abstract

Objective: The aim was to conduct comparative study of using dry needling under ultrasound guidance vs ESWT for detecting MTrP and myofascial pain and spasticity treatment. **Background:** Dry needling (DN) of myofascial trigger points (MTrP) under ultrasound (US) guidance is a prioritized method for treatment myofascial pain [1] and restoring posture [2] and is effective in management various types of spasticity [3]. Extracorporeal shock wave therapy (ESWT) is supposed to alleviate myofascial pain. Comparison of efficacy of DN-US and ESWT has not been studied yet. **Methods:** We included 40 patients, 12 females, 27-63 years clinically diagnosed chronic low back pain. All patients underwent general exam, including MRI, precise physical tests and functional ultrasound. We used ESWT for detecting area of potential MTrP using Storz Medical DUOLITH® SD1 Ultra. Then patients were assigned to: group 1 patients received DN of MTrP under US guidance according to approach by R. Bubnov [1]; group 2 received ESWT only. VAS 0-10 scores were measured in all patients before, 1, 24 hours, 7 days after intervention. **Results:** In 55% cases with positive subjective response at areas of ESWT probe position correctly indicated clinically relevant MTrP / spasticity, however, precise detection of MTrP to performs guidance of deep needling was not feasible. Pain relief in groups 1 VAS scores changed from 7.4 to 2.3 ($p < 0.05$) immediately after and remained 24 hours after in all cases. US demonstrated improvement muscle structure, increasing motility,

contractility. In ESWT group VAS improved from 7.2 to 5.2 immediately after, and relapsed after intervention. Signs of inactivation trigger points, motion recovery were not recognized. Conclusions: ESWT has fair level of detecting MTrP, short-term effect in ameliorating myofascial pain, and does not improve local muscle motility in low back pain. ESWT can be included to protocols of management various types of pain and spasticity, however, further studies to validate efficacy are required.

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