How to treat myofascial pain syndrome of the low back: corticosteroid injection or ultrasound? A single blinded randomized clinical trial

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AIM: The present study examines the effects of corticosteroid injection (CSI) and ultrasound (US) methods in the treatment of low back myofascial pain syndrome (MPS).

METHODS: This single-blind prospective randomized trial was conducted on 180 patients with back MPS. The patients were randomly assigned to either CSI (N.=89) or US (N.=91) treatment group. The CSI group received 1 mL methylprednisolone 40 mg/mL at Myofascial trigger point. The US group received 15 sessions of US with intensity of 1.5 W/cm2, 1 MHz frequency in continuous mode, each session lasting for eight minutes. Before treatment and at one week and 12 weeks post-treatment, pain intensity, disability status and quality of life were measured based on Visual Analogue Scale, Pain Disability Index and short form health survey (SF36) respectively.

RESULTS: In both CSI and US groups, pain and disability were reduced and quality of life increased ($P<0.001$). While improvement rates were similar between the two groups ($P>0.05$), improvement trend was faster in CSI group ($P<0.05$). At final visit, 75 patients (82.4%) in CSI group and 69 patients (77.5%) in US group had more than 50% pain reduction.

CONCLUSION: Both CSI and US methods are similarly effective in the treatment of back MPS. However, the difference is in the speed of recovery and invasiveness of the method applied. The selection of the appropriate method depends on the physician's experience and patient's compliance.