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Usefulness of magnetic resonance elastography in diagnosing myofascial pain syndrome: A pilot study**Dong Yoon Park**

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Introduction & Aim: Myofascial Pain Syndrome (MPS) is muscle pain caused by increased muscle stiffness; the affected areas are usually referred to as trigger points. In the majority of cases of MPS, the diagnosis is based on clinical examination. This study aimed to evaluate the stiffness of the upper trapezius muscle in patients with MPS compared with that in controls, using 3T Magnetic Resonance Elastography (MRE).

Materials & Methods: This was a case-control study that comprised 12 patients with a confirmed diagnosis of MPS and 12 healthy controls. The Mean Stiffness Value (MSV) of the trapezius muscle was measured using 3T magnetic resonance by means of a 2-dimensional gradient-echo-based MRE sequence. Differences between the MSV in the two excitation frequencies (90 and 120 Hz) at x, y and z motion-sensitization directions were assessed.

Results: At 90 Hz, the overall MSV of the upper trapezius in patients with MPS and controls was 2.85 ± 0.45 kPa and 2.42 ± 0.33 kPa, respectively. The MSV in the patient group was significantly higher than in the control group.

Conclusion: In this study, increased stiffness of the upper trapezius muscle was observed in patients with MPS. Thus, MRE can be used as a quantitative and noninvasive method to indicate skeletal muscle stiffness.

Biography

Dong Yoon Park has completed his graduation from Inha University College of Medicine in 2008 and was trained at St. Mary Hospital as a Resident for 4 years. He is currently working as a Clinical Assistant Professor of Department of Rehabilitation Medicine at Korea University Guro Hospital. His research interests are musculoskeletal pain, electrodiagnosis, spinal intervention and musculoskeletal ultrasound.

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