

Review of Sonoelastography in the Assessment of Myofascial Pain Syndrome: A Novel Technique

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AIM OF INVESTIGATION: In recent years, sonoelastography has been using in the diagnosis of myofascial pain syndrome (MPS). This review aimed to summarize current knowledge regarding the application of sonoelastography in diagnosing MPS.

MATERIALS AND METHODS: A search for studies of sonoelastography, MPS and fibromyalgia was carried out in PubMed Electronic databases from inception to November 2018. Total 43 articles matched. Abstracts of those articles were reviewed and irrelevant articles were excluded. Total 15 studies were included and full articles were reviewed. Results were summarized using descriptive statistics.

RESULTS: Among the total 15 studies identified, one is randomized control trial, majority of other studies are descriptive or case control studies. The study sample size ranges from 4 to 50 subjects. The sonoelastography technique applied in the studies include vibration sonoelastography (VSE), shear wave elastography (SWE), and elastography strain ratio. The most common muscle groups investigated in the studies are upper trapezius muscles (10 out of the 15 studies), followed by lumbar erector spinae, multifidus muscles, biceps brachii, quadratus lumborum, longissimus thoracis, piriformis, gluteus medius muscles, and Masseter muscle. The studies showed promising results in identifying MTrPs in MPS. However, sonoelastography failed to identify tender point in fibromyalgia.

CONCLUSION: Sonoelastography is a useful tool to assess MPS, to differentiate active and latent MTrPs, and to monitor treatment effect. However, sonoelastography may not be able to discriminate tender points in fibromyalgia. Further studies are required to establish the best type of sonoelastography technique, and to validate its sensitivity and specificity.