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Contribution of the local and referred pain from active myofascial trigger points in fibromyalgia syndrome.

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Abstract

The generalized hypersensitivity associated with fibromyalgia syndrome (FMS) may in part be driven by peripheral nociceptive sources. The aim of the study was to investigate whether local and referred pain from active myofascial trigger points (MTrPs) contributes to fibromyalgia pain. FMS patients and healthy controls (n=22 each, age- and gender-matched) were recruited. The surface area over the upper trapezius muscle on each side was divided into 13 sub-areas (points) of 1cm in diameter for each point. Pressure pain threshold (PPT) and the local and referred pain pattern induced by manual palpation at 13 points bilaterally in the upper trapezius were recorded. Results showed that PPT levels at all measured points were significantly lower in FMS than controls. Multiple active MTrPs (7.4+/-2.2) were identified bilaterally in the muscle in FMS patients, but no active MTrPs were found in controls. The mid-fiber region of the muscle had the lowest PPT level with the largest number of active MTrPs in FMS and with the largest number of latent MTrPs in controls. The local and referred pain pattern induced from active MTrPs bilaterally in the upper trapezius muscle were similar to the ongoing pain pattern in the neck and shoulder region in FMS. In conclusion, active MTrPs bilaterally in the upper trapezius muscle contribute to the neck and shoulder pain in FMS. Active MTrPs may serve as one of the sources of noxious input leading to the sensitization of spinal and supraspinal pain pathways in FMS.

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