RELIABILITY OF A SHORT PROTOCOL FOR QUANTITATIVE SENSORY TESTING IN ACUTE LOW BACK PAIN

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INTRODUCTION / AIM

Quantitative sensory testing (QST) is used to characterize somatosensory processing in pathologic pain conditions. However, there is little information on the repeatability of these measures in the clinical setting. We evaluated the between-day reliability and the minimal detectable change (MDC) of the individual components of a short QST protocol to identify possible central sensitization in individuals with acute low back pain.

METHODS

Four QST measures, including: light brushing to test for allodynia, temporal summation of noxious tactile stimulation, pressure pain threshold (PPT) and conditioned pain modulation (PPT with concurrent occlusion of upper arm) were evaluated in 13 healthy participants, on two separate days (24-48 hours apart). Three body sites were tested: mid-muscle belly of the dorsal non-dominant forearm, over the L3/4 interspinous ligament, and 5 cm lateral to the L3/4 interspinous ligament on the same side as the dominant forearm. Between day reliability metrics were determined using ICCs. MDC was subsequently computed for each measure at each site.

RESULTS

No participant experienced allodynia. The intra-rater between-day reliability for PPT testing, with and without occlusion, was good to excellent at all sites (all ICC(3,3) values above 0.85). TS reliability was fair to good (all ICC(3,1) values above 0.70). Average PPT values ranged from 24.63 to 60.69N with MDC at the different sites between 15.25 and 23.66 N.

DISCUSSION / CONCLUSIONS

The between day reliability of the individual components of a short QST protocol is adequate to determine group differences or changes over time.

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