Sensory Characteristics of Low Back Tender Points

Lewis C, Souvlis T, Sterling M (2010)
Manual Therapy, 15, 451-456

Strain-Counterstrain (SCS) is a form of spinal manipulative therapy involving passive body positioning which claims to reduce tenderness at SCS tender points and elicit reductions in pain and dysfunction. It has been proposed that dysfunctional joints in the spine are commonly associated with digitally tender points (DTPs) found at the adjacent spinous processes or paravertebral musculature.

Lewis et al (2010) conducted a controlled, within-subjects study to characterise DTPs using qualitative sensory testing (QST), in the lower back region of participants with low back pain (LBP), by comparing them with contralateral non-tender points (CNTPs).

Fifteen participants with LBP (9 females and 6 males) and 15 (6 females and 9 males) without LBP were recruited. Participants were included regardless of whether symptoms were unilateral or bilateral, the chronicity of symptoms, presence of leg symptoms, or medications taken. Additional inclusion criteria were: between 18 and 65 years of age; able to lie prone; having two or more DTPs (SCS tender points) identified at lower back sites.

The outcome measures used included ‘General Health Questionnaire-28’, ‘Oswestry Disability Questionnaire’ and Visual Analogue Scale (VAS).

The SCS tender points and test points were marked bilaterally on both groups of participants. QST included assessment of electrical detection threshold, electrical pain threshold, warmth detection threshold, cold detection threshold, warmth pain threshold, cold pain threshold, vibration threshold (VT) and pressure-pain threshold (PPT).

The results of this study indicated that participants with LBP demonstrated reduced electrical detection (hyperaesthesia) and electrical pain threshold (hyperalgesia) at DTPs. Participants with LBP demonstrated decreased cold pain thresholds (cold hyperalgesia) compared to subjects without LBP at both the lumbar and the peripheral shoulder site. These are indicative of disturbed A beta fibre function as a consequence of altered central pain processing.