Test-retest reliability of thermal quantitative sensory testing on two sites within the LS dermatome of the lumbar spine and lower extremity.

Introduction. Quantitative sensory testing (QST) is widely used in human research to investigate the integrity of the sensory function in patients with pain of neuropathie origin, or other causes such as low back pain. Reliability of QST has been evaluated on both sides of the face, hands and feet as well as on the trunk (Th3-L3). **In** order to apply these tests on other body-parts such as the lower lumbar spine, it is important first to establish reliability on healthy individuals. The aim of this study was to investigate intra-rater reliability of thermal QST in healthy adults, on two sites within the L5 dermatome of the lumbar spine and lower extremity.

Methods. Test-retest reliability of thermal QST was determined at the L5-level of the lumbar spine and in the same dermatome on the lower extremity in 30 healthy persans under 40 years of age. Results were analyzed using descriptive statistics and intraclass correlation coefficient (ICC). Values were compared to normative data, using Z-transformation.

Results. Mean intra-individual differences were small for cold and warm detection thresholds but larger for pain thresholds. ICC values showed excellent reliability for warm detection and heat pain threshold, good-to-excellent reliability for cold pain threshold and fair-ta-excellent reliability for cold detection threshold. ICC had large ranges of confidence interval (95%).

Conclusion. In healthy adults, thermal QST on the lumbar spine and lower extremity demonstrated fair-ta-excellent test-retest reliability.

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Funding

Commission scientifique du domaine santé HES-SO

Term

18 months

HESAV
RECHERCHE