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SENSORIMOTOR AND BODY PERCEPTION ASSESSMENTS IN CHRONIC NONSPECIFIC LOW BACK PAIN

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Introduction

Chronic nonspecific low back pain (CNLBP) is a common problem in our population and a major issue in health care in Switzerland, where 39% of men and 46% of women suffer from „little“ to „a lot“ pain. Current research focuses on the processes of the central nervous system in pain perception, in order to find a new and more efficient way to treat CNLBP. Current scientific evidence suggests the presence of neurochemical, structural and functional alterations in the primary sensory cortex of CNLBP. These factors result in altered cortical representation and body perception. Several tests have been suggested as a clinical correlate of altered cortical representation. These include back photo assessment, movement control test and two-point discrimination threshold.
The aim of this study is therefore to investigate whether back photo assessment, movement control test or two-point discrimination threshold is the most suitable test to distinguish patients with CNLBP from healthy persons.

Methods

A case control study was used for this study, matched for gender and age. 30 chronic nonspecific low back pain patients and 30 healthy controls were investigated at one time point with a movement control test battery on the lower back, two-point discrimination and a back photo assessment. Additionally, participants were asked to fill in three questionnaires, the “Fear Avoidance Belief Questionnaire”, the “Hospital Anxiety and Depression Scale” and the “Fremantle Back Awareness Questionnaire”. Correlations and Odds ratios were calculated for group differences.

Results

The movement control test showed a statistical significant correlation for CNLBP with an odds ratio of 1.96 ($p = 0.049$). Two-point discrimination and back photo assessment did not reveal a statistical significant correlation for CNLBP.

Discussion and Conclusion

MCT, TPD and back photo assessment were investigated for their ability in detecting CNLBP patients. The MCT was the only test able to successfully distinguish CNLBP patients from healthy controls with an odds ratio of 1.92. Further research needs to be undertaken in order to improve the back photo assessment and the TPD, to evaluate whether these tests could be used to detect CNLBP patients.