

Title:

Neurological Soft Signs are Present More Often and to a Greater Extent in Adults with Chronic Low Back Pain with Cognitive Learning Deficits

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Introduction

Primitive reflexes (PR) are part of a group of neurological soft signs and are known to be present in several different health related conditions. They are related to altered motor and cognitive function. If PR are present more in chronic low back pain (CLBP) patients, it may have implications for clinicians in providing education and who try to teach exercises involving fine motor function. The purpose of this study was to investigate if PR are present more in subjects with CLBP compared to normal subjects.

Materials & methods

7 PR were assessed in 58 subjects (age range 24-54; mean 41.8; 37F / 21M) with CLBP and 37 matched controls (age range 22- 52; mean 39.6; 26F / 11M) by 1 experienced physiotherapist, twice between 5 – 14 days. 3 measurements were taken each session. Subjects were included if they were between the ages of 19-55, had CLBP for more than a year, had a Roland Morris Disability Questionnaire score greater than 15 and a score greater than 79 on the Motor Control Abilities Questionnaire. The presence or absence of the PR and the severity of them were rated on a 5 point scale (0-4).

Analysis

SPSS software (version 16) was used for statistical analysis. Descriptive statistics were used to describe within group items, the Mann-Whitney U test was used to describe between groups differences and intratester reliability was assessed with the intra-class correlation coefficient (ICC) using repeated measures ANOVA.

Results

ICC were good between the first and second measurements between the control group (0.89) and the CLBP group (0.81). The mean score in the control group was 3.2, while in the CLBP group it was 11.8 ($P < 0.001$). In the control group, no subject had all reflexes present, while in the CLBP group 67.2% had all reflexes present ($P < 0.001$).

Conclusions

PR may be present in CLBP subjects greater than normal subjects. This may have implications for clinicians when providing information and prescribing therapeutic exercise. Further research is warranted in this area.

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