

Cross Friction Algometry (CFA): Comparison of Pressure Pain Thresholds between Patients with Chronic Non-specific Low Back Pain and Healthy Subjects.

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PURPOSE To investigate the pressure pain thresholds obtained using Cross-Friction Algometry (CFA-PPTs) with respect to Erector spinae (ES) and Gluteus maximus (GLUTmax) in a group of thirty patients with chronic non-specific low back pain (nCLBP) and to evaluate the relationship between the CFA-PPTs and the results of the resp. means of the Visual Analogue Scale (VAS) and the Oswestry Disability Index (ODI).



METHODS In order to obtain reference values, an equal number of matching healthy subjects (n=30) were examined with respect to CFA-PPTs and used as a control group.

RESULTS The mean CFA-PPTs of ES at level T8, T10, L1 & L3 and Glutmax at the superior and inferior level of the nCLBP group were significantly lower ($p < 0.001$) in comparison to the healthy group. The highest difference (- 58 %) was found at the L1 ES level and exceptionally high at the superior part of the Gluteus maximus measuring point (- 59 %). Within the group of patients with nCLBP it was surprising to notice that there was no significant correlation between all reference points measured CFA-PPTs and resp. the outcomes of the VAS and ODI scores.

DISCUSSION This study showed on one hand the extremely high differences between CFA-PPTs on the thoraco-lumbo-pelvic myofascial parts and on the other hand the non-existence of any relationship with measured pain scale and/or the used disability index. The importance of local muscular disorder in the lumbar part of the ES and Gluteal muscles in patients with nCLBP is obvious, but also reveals the very large inter-individual differences in muscular fibrosis sensitivity and/or pain behavior in daily live.

CONCLUSIONS The results of this study probably suggest rather the minor role of central sensitization but more the high degree of purely individual character differences when dealing with “chronic pain”. In future, more search should be undertaken to develop finest imaging techniques which make it possible to demonstrate the hidden presence of muscle sclerosis in patients with nCLBP on the thoraco-lumbo-pelvic myofascial parts in combination with cross-friction algometric measurements in stead of paying attention on central sensitivity patterns.

REFERENCE

Farasyn A., Lasat B. Cross Friction Algometry (CFA): Comparison of Pressure Pain Thresholds between Patients with Chronic Non-specific Low Back Pain and Healthy Subjects. Under review: send to the European Journal of Pain 2015.