

The Effects of High Velocity Low Amplitude Thrust Manipulation versus Low Velocity Low Amplitude Mobilization in Treatment of Chronic Mechanical Low Back Pain

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Abstract : Background: High-velocity low amplitude thrust (HVLAT) manipulation and low-velocity low amplitude (LVLA) mobilization are an effective treatment for low back pain (LBP). Purpose: This study compared the effects of HVLAT versus LVLA on pain, functional deficits and segmental mobility in treatment of chronic mechanical LBP. Methods: Ninety patients suffering from chronic mechanical LBP are classified to three groups; Thirty patients treated by HVLAT (group I), thirty patients treated by LVLA (group II) and thirty patients as control group (group III) participated in the study. The mean age was 28.00 ± 2.92 , 27.83 ± 2.28 and 28.07 ± 3.05 years and BMI 27.98 ± 2.60 , 28.80 ± 2.40 and 28.70 ± 2.53 kg/m² for group I, II and III respectively. The Visual Analogue Scale (VAS), the Oswestry low back pain disability questionnaire and modified schoper test were used for assessment. Assessments were conducted two weeks before and after treatment with the control group being assessed at the same time intervals. The treatment program group one was two weeks single session per week, and for group II two sessions per week for two weeks. Results: The One-way ANOVA revealed that group I had significantly lower pain scores and Oswestry score compared with group II two weeks after treatment. Moreover, the mobility in modified schoper increased significantly and the pain scores and Oswestry scores decreased significantly after treatment in group I and II compared with control group. Interpretation/Conclusion: HVLAT is preferable to LVLA mobilization, possibly due to a beneficial neurophysiological effect by Stimulating mechanically sensitive neurons in the lumbar facet joint capsule.

Keywords : low back pain, manipulation, mobilization, low velocity

Conference Title : ICBSE 2015 : International Conference on Biomechanics and Sports Engineering

Conference Location : Kuala Lumpur, Malaysia

Conference Dates : February 12-13, 2015