E-Poster

EP-499

Alpha-Lipoic Acid Has Shown Promising Results in Improving Nerve Conduction Parameters in Chronic Low Back Pain

Topic: Pharmacological Agents

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BACKGROUND

While there is evidence supporting the potential of Alpha-lipoic acid (ALA) to improve nerve conduction parameters in certain neurological conditions, particularly diabetic neuropathy, its specific effects on nerve conduction in chronic low back pain (CLBP) patients have not been directly addressed in the current context. To describe the nerve conduction study findings in a patient with CLBP treated with ALA.

METHODS

A quasi-experimental, pre-test post-test repeated measures design was used to include 15 patients at the Clinic for Physical Medicine and Rehabilitation, Clinical Center of the University of Sarajevo, in a three-week follow-up period. The patients were treated with 600 mg of Alpha-lipoic acid supplementation per day and participated in Huber proprioception training five days per week. Patients were followed for the next three weeks, with two study visits: one at baseline and one at the end of the study. The study visits included electromyography (EMG) and Nerve Conduction Studies. A p-value of < 0.05 was considered significant.

RESULTS

Out of the total patients ($n = 15$), 11 (73.3%) were male. The most commonly affected levels were L4/L5 (87%), followed by L3/L4 (6.5%) and L5/S1 (6.5%). There was a statistically significant median increase after three weeks in both proximal ($z = -3.298$, $p < .001$) and distal peroneal M wave amplitude ($z = -3.415$, $p < .001$). A statistically significant median increase was also observed in proximal ($z = -3.408$, $p < .001$) and distal tibial M wave amplitude ($z = -3.409$, $p < .001$).

CONCLUSION

Further research focusing on low back pain and ALA supplementation is necessary to draw definitive conclusions about its efficacy in this particular condition.

Statement of Disclosures

None

Doi: 10.5606/archisprm.2026.EP-499

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