

NADA Ear Acupuncture and Medical Acupuncture for Pain- and Health-Related Quality of Life among Older Patients with Chronic Nonspecific Low Back Pain: A Prospective Clinical Trial

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Abstract

Background: The purpose of this study was to investigate the efficacy and safety of the NADA (National Acupuncture Detoxification Association)-standardized ear acupuncture protocol in comparison to medical acupuncture (MA) in the treatment of chronic nonspecific low back pain (LBP) in older adults.

Methods: This was a prospective, clinical, single center, open label, comparative study. A total of 60 older patients with chronic nonspecific LBP were enrolled in the study. The patients were divided into two groups. The MA group received treatment with medical acupuncture (MA), while the NADA group received NADA ear acupuncture once a day for 20 min, for a total of 10 sessions. The co-primary outcome measures were the reduction in pain intensity evaluated by the Numeric Rating Scale (NRS) compared to baseline and improvement in patients' quality of life (QOL) assessed in the SF-36

questionnaire before and after treatment; this was compared between the two groups.

Results: After two weeks of treatment, a significant reduction compared to baseline was observed in the NRS scores following treatment with medical acupuncture as well as after the utilization of NADA ear acupuncture protocol: NRS score for average pain experienced by the patients over the previous week (NRSa) MA: $p = 0.002$; NADA: $p < 0.001$, maximum NRS score in the past week (NRSm) MA: $p < 0.001$; NADA: $p < 0.001$, and NRS score at the time of examination (NRSe) MA: $p = 0.001$; NADA: $p < 0.001$. Reduction of the NRSa score compared to baseline was significantly greater in the NADA group ($p = 0.034$). Significant improvements in the QOL of patients according to the SF-36 questionnaire compared to baseline were observed in the MA group in the following domains: PF ($p = 0.003$), RP ($p = 0.002$), SF ($p = 0.041$), RE ($p = 0.005$), MH ($p = 0.043$), HT ($p = 0.013$), PCS ($p = 0.004$), and MCS ($p = 0.025$); and in the NADA group, in the following domains: PF ($p = 0.004$), RP ($p = 0.048$), BP ($p = 0.001$), VT ($p = 0.035$), RE ($p = 0.006$), MH ($p < 0.001$), HT ($p = 0.003$), PCS ($p < 0.001$), and MCS ($p < 0.001$). There were minor complications observed in 35% of patients (total of 20 participants); 31% (9 patients) in the MA group and 39% (11 patients) in the NADA group. These were minor and quickly resolved, including insertion point pain, minor bleeding after needle removal, and one instance of fainting. No patients in either group reported worsening of LBP. These complications occurred in 4.14% of MA sessions (12 times/290 sessions) and in 6.07% of NADA acupuncture sessions (16 times/280 sessions).

Conclusion: The outcomes of this study suggest that both MA and NADA ear acupuncture could be a valuable and personalized component of a comprehensive approach to managing chronic nonspecific LBP in older patients. Incorporation of MA and NADA ear acupuncture into the clinical management of chronic nonspecific LBP in elderly patients has the potential to reduce pain intensity and improve the overall quality of life of affected individuals. However, further studies are needed to confirm our findings.

Keywords: NADA protocol; chronic nonspecific low back pain; medical acupuncture; nonpharmacological pain management; older patients.

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Conflict of interest statement

The authors declare no conflicts of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript; or in the decision to publish the results. The authors

declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Figures

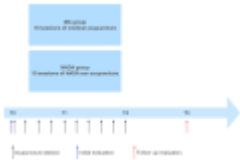


Figure 1

Study timeline: T0: initial visit...



Figure 2

Number of participants in each...

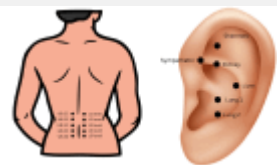


Figure 3

Acupoints used in the MA...

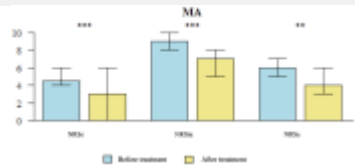


Figure 4

Comparison of NRS Pain Scores...

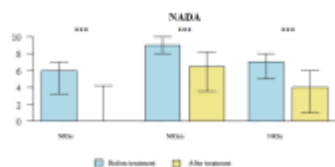


Figure 5

Comparison of NRS Pain Scores...

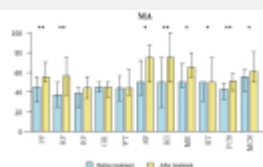


Figure 6

Comparison in QOL measures after...

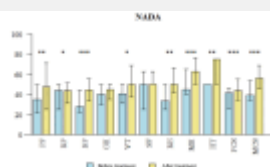


Figure 7

Comparison of QOL measures after...