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Effect of botulinum toxin type A injection on pain symptoms, quality of life and sleep quality of patients with diabetic neuropathy: A randomized double-blind clinical trial

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Background and Objective: Neuropathic pain is one of the most common problems in diabetic patients. In this study, the effect of type A botulinum toxin on neuropathic pain, quality of sleep and life of diabetic patients with sensorimotor polyneuropathy were studied.

Materials and Methods: This randomized, placebo-controlled trial study was carried out in a double-blind (patient-researcher) study. This study was performed on 32 patients with type 2 diabetes. Neuropathy was confirmed by DN4 questionnaire and nerve conduction study. They were randomly assigned to two intervention and control groups based on the random numbers table. After selecting the subjects, we used Short Form-36 Quality-of-Life Questionnaire, Neuropathic Pain Scale, visual analogue scale and The Pittsburgh Sleep Quality Index questionnaires before and after 3 months of 100 units botulinum toxin type A injection (as intervention group) or same amount of chloride sodium (as control group) to the subjects' feet. The data were analyzed by SPSS-20 software using independent two-sample t-test, chi-square test and one-way repeated measures ANOVA.

Results: Twelve male and 20 female patients participated in this study. There was a significant difference in the mean VAS, PSQI, physical dimension of the quality of life and some NPS indices over time (12 weeks) (P value <0.001).

Conclusion: The results of this study showed that botulinum toxin type A reduces neuropathic pain, improves the quality of life and sleep in people with diabetic neuropathy.

Keywords: Neuropathic pain, Quality of life, sleep quality, Botulinum Toxin A, Diabetes, Rafsanjan

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Effect of Oleuropein on Morphine-induced working Memory Impairments in Rats

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