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Evaluation of concentrations of botulinum toxin A for the treatment of hemifacial spasm: a randomized double-blind crossover trial

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ABSTRACT. The aim of our study was to evaluate the efficacy and safety of two concentrations of botulinum toxin A (BTX-A) for the treatment of hemifacial spasm. We randomly divided 20 patients with hemifacial spasm into high- and low-concentration groups; they were administered 50 and 25 U/mL BTX-A injection, respectively. Further, we compared the curative effects and the occurrence of adverse reactions in the two groups. Our results showed that both the concentrations of BTX-A were effective and no significant difference was observed in the onset time and therapeutic efficacy between the two groups; however, the duration of efficacy was longer in the high-concentration group than in the low-concentration group. Patients in both groups had no allergic reactions and systemic toxic reactions, but those in the high-concentration group had more serious adverse reactions and they lasted for longer durations. The adverse reactions in the two groups were not specifically treated, and they resolved in a relatively short time. In conclusion, local injection of BTX-A was effective in treating hemifacial spasm and each concentration of BTX-A had advantages and disadvantages, which indicated that the concentration of BTX-A

can be selected according to the clinical characteristics and willingness of the patients.

Key words: Botulinum toxin A; Dilution; Hemifacial spasm; Randomized controlled trial

