INVESTIGATION OF THE EFFICACY AND SAFETY OF TOPICAL VIBRATION ANESTHESIA TO REDUCE PAIN FROM COSMETIC BOTULINUM TOXIN A INJECTIONS IN CHINESE PATIENTS: A MULTICENTER, RANDOMIZED, SELF-CONTROLLED STUDY

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Background/Introduction: Vibration anesthesia has been proved to be effective to reduce pain during facial cosmetic injections, but it has not been studied in Chinese patients and anatomic sites other than face.

Objective: To investigate the efficacy and safety of vibration anesthesia for pain reduction associated with cosmetic botulinum toxin A (BTX-A) injections in Chinese patients and anatomic sites other than face.

Methods & Materials: In this prospective, randomized, split-face & right-left, self-Controlled study, 53 patients received BTX-A injections for facial rhytids reduction, lower face, shoulder, or posterior leg contour reshaping. A vibration stimulus was co-administered with the BTX-A injections on one side (treatment), whereas the other side received the BTX-A injections only (control). Immediately after treatment, the patients completed a questionnaire composed of a visual analogue scale of pain sensation (VAS), a preference question, and a statement of the feelings and/or questions they might have about the vibration treatment. The patients were also followed up two weeks later.

Results: The patients experienced both clinically and statistically significant pain reduction when a vibration was co-administered with injections. The mean patient-reported VAS scores were 3.6 ± 1.3 for the vibration-treated side and 5.6 ± 1.8 for the control side (p = 0.000). No difference was found between the patients receiving two different BTX-A products injection. No difference was found between the treatment-naïve patients and repeated patients. Overall, 75% of patients preferred to receive vibration for their next treatment. Positive feedback, psychological benefits, and needs for optimizing vibration
parameters were identified in the patients’ statement. No adverse events and no delayed or declined toxin effect were reported.

Conclusions: Topical vibration anesthesia during cosmetic BTX-A injections had a beneficial effect that was statistically and clinically significant in terms of patients’ assessment of pain. It may have applications in other cosmetic procedures.