Assessment of intralesional injection of botulinum toxin type A in hypertrophic scars and keloids: Clinical and pathological study

Abstract

Keloids and hypertrophic scars are cosmetic problems with significant morbidity. Many clinical modalities were tried in order to modulate the disfigurement related to these pathologic scars. To evaluate the clinical and histopathological effects of Botulinum toxin type A (BTX-A) injection on keloids and hypertrophic scars. Twelve patients with keloids and 8 with hypertrophic scars were enrolled in this study. Botulinum toxin type A was injected intralesional (1 session/month) for three sessions. Clinical outcome was assessed via Vancouver Scar Scale (VSS), Observer Scar Assessment Scale (OSAS), and the Patient Scar Assessment Scale (PSAS). Histologic grading scores were used to assess the changes in the quality of collagen and elastic tissues and image analysis was used to detect their quantitative morphometric changes. This study showed a high statistically significant difference between baseline and the result after each of the three sessions of injection and 3, 6 months after the last session regarding VSS, OSAS, and PSAS with p value $\leq$0.001 for each. The study also showed that there was a statistically significant difference between the histopathologic findings before injection of BTX and 1 month after the third session regarding all parameters used. Botulinum toxin type A can be a good therapeutic maneuver for management of keloid and hypertrophic scars with significant clinical and histologic improvement.

KEYWORDS

botulinum toxin-A, hypertrophic scar, keloid