

The wrinkles soothing effect on the middle and lower face by intradermal injection of botulinum toxin type A

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摘要

BACKGROUND: Botulinum toxin type A (BTA) has been used on facial expressive muscles to reduce wrinkles. We assumed that intradermal injection with BTA on the middle and lower face can produce face-lifting and wrinkles-soothing effect by promoting collagen synthesis. **METHODS:** Nine volunteers were included to undergo intradermal injections of a total dose of 20~25 U BTA into one-half of the face, and normal saline into the other half as control. Clinical photographs were taken every 4 weeks for 16 weeks, and evaluated by a doctor blinded to the assignments. Patients graded the results of wrinkles elimination on each follow-up. Skin biopsies were taken before the treatment and 8 weeks after the injection. The specimens were assessed by a pathologist using hematoxylin and eosin stain, elastin stain, Masson trichrome stain and immunohistochemical stain with type I procollagen. **RESULTS:** By photographic documentation, there was no significant face-lifting effect. However, there was statistical significance in wrinkles reduction on the BTA sides compared to pre-treatment. Subjectively, six subjects noticed better wrinkles soothing effect on the BTA sides. This effect was noted as early as 4 weeks after injection, and lasted for a minimum 8 weeks. The histologic examination revealed slight neocollagen synthesis by Masson trichrome stain on both sides. **CONCLUSIONS:** Based on this pilot study, the face-lifting effect of intradermal injection with BTA was not conclusive. Interestingly, BTA showed moderate but significant wrinkles-soothing effect without obvious side effects on the lower face.