

The role of botulinum toxin in correcting frontalis-induced eyelid pseudo-retraction post ptosis surgery

Dear Editor,

I have read the article by Shome *et al.*¹ with interest and found it to be very useful. The application of botulinum toxin in clinical practice is expanding. The present study also opened a possible new indication for its use in ophthalmology practice. However, in this connection I would like to mention a few things.

Botulinum toxin interferes with neuromuscular transmission by blocking the release of acetylcholine and causes muscular weakness. Denervation of neuromuscular junction does not cause permanent damage to nerve terminals and is reversible² and the functions can be recovered by axonal sprouting and formation of new synaptic contacts, which usually takes two

to three months.³ The mechanism of recovery is not known. The case in the present study¹ improved after giving a single injection of botulinum toxin, but the patient was followed up for eight months only. Simon *et al.*⁴ found in their study that the effect of a single injection of botox lasted for three months to two years, which is longer than the expected duration of action of the toxin.

However, the number of patients in their studies was small. Although the effects of permanent motor learning and resetting the point for muscle contraction due to temporary chemo denervation by the toxin cannot be ruled out, it requires further study with large number of patients to see the duration of the effect of a single dose of botulinum toxin and the necessary dosage, in relieving frontalis-induced eyelid pseudo-retraction post ptosis surgery.

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References

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