

Botulinum toxin injection in the lacrimal gland for treatment of epiphora due to proximal lacrimal system obstruction

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Aim: To investigate the efficacy of botulinum toxin A (BTA) injection in the lacrimal gland for the treatment of epiphora due to proximal lacrimal system obstruction.

Materials and Methods: A retrospective chart review was performed for patients who had undergone BTA injection in the lacrimal gland. The upper lacrimal system obstruction was diagnosed by lacrimal system irrigation and tear testing was performed with Schirmer paper. Munk epiphora grading was used for evaluation of epiphora. 4 units of BTA injection in the palpebral lobe of lacrimal gland was performed under direct visualization transconjunctivally. All patients were asked to grade their epiphora and Schirmer testing was performed on tenth day, first, third and sixth months.

Results: A total of 55 patients (19 male, 34 female) with a mean age of 50.15 ± 15.9 years had injection of BTA in the lacrimal gland. The mean follow-up was 15.7 ± 13.3 months. Improvement of epiphora was statistically significant at all visits when compared with values before injection ($p < 0.001$, paired t test). Although there was a significant decrease in Schirmer test results ($p < 0.001$, paired t-test), none of the patients had corneal staining or punctate epitheliopathy. There was no correlation between change in degree of epiphora and ages of the patients ($p = 0,48$). Nine patients (16.3%) had blepharoptosis that resolved in 3 weeks. Eight patients (14.5%) had multiple injections as a result of patients' high satisfaction with the treatment.

Conclusion: Botulinum toxin A injection in the lacrimal gland is a non-invasive, safe, transient, less time consuming and easily performed procedure with less complications. It can be considered as an alternative treatment in patients with proximal lacrimal system obstruction.