134 Botulinum Toxin Injection to the Lacrimal Gland for the Treatment of Epiphora

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Botulinum toxin injection to the lacrimal gland can be useful to control epiphora in patients with no drainage system. I have had a number of patients that lost their lacrimal sac following extirpation of a tumor. Some of them refused Jones tube surgery, while others were simply poor surgical candidates. Botulinum toxin injection to the lacrimal gland is very effective at controlling their symptoms of epiphora, as it is with "crocodile tears" after a Bell's palsy.

Using a 1/2″ 30-gauge needle on a tuberculin syringe, I advance the needle through the skin near the superotemporal orbital rim (Fig. 134.1). I aim the needle directly posteriorly for the first 2 mm and then direct the needle superotemporally so that I am in the lacrimal gland fossa. In order to be as far away as possible from the rectus muscles or levator muscle (and avoid diplopia or ptosis), I actually touch the bone with the needle tip within the lacrimal gland fossa (Fig. 134.2). I then inject 0.1 cc (3.3 units) as I withdraw the needle just a millimeter (so that I am off the bones) (Fig. 134.3). This usually gives significant relief from epiphora for 6–8 months.

Fig. 134.1 The *blue* "L" marks the point of injection for the lacrimal gland

Fig. 134.2 After entering the skin, the needle is advanced posteriorly and superotemporally within the lacrimal gland fossa

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M.E. Hartstein et al. (eds.), *Pearls and Pitfalls in Cosmetic Oculoplastic Surgery*,
DOI 10.1007/978-1-4939-1544-6_134,

Fig. 134.3 A total of 0.1 cc is injected as the needle is withdrawn 1–2 mm away from the bones