

## **Volumizing hyaluronic acid filler as temporary tissue expander in lower eyelid cicatricial ectropion**

**D. Georgescu**

*Oculoplastic Institute, Bucharest, Romania*

**Introduction:** Anterior lamella deficiency is a common cause of cicatricial ectropion and can have severe functional and esthetic consequences. Over the past 10 years, hyaluronic acid fillers have been injected successfully into the lower eyelids for the treatment of ectropion and retraction, with the goal of supporting or expanding the tissues.<sup>1-4</sup> So far, the filler was left in place and allowed to degrade naturally.

Here we report a case of volumizing hyaluronic acid (Belotero Volume) placement for 5 months as tissue expander between the skin and the orbicularis oculi muscle for lower eyelid cicatricial ectropion.

**Methods:** Retrospective chart review. The pre and post-injection photographs were analyzed using the Image J software from NIH (Bethesda, MD) where the limbus to limbus distance was normalized to 12 mm. The MRD-2 distance was measured bilaterally before and after the Belotero Volume injection, one week and 5 months after the injection of hyaluronidase.

**Case presentation:** 24 y.o. man with severe exposure keratopathy and 1 mm of lagophthalmos from cicatricial ectropion (skin-only deficiency) after repeated bilateral lower eyelid *Xanthelasma* excision. One ml of Belotero Volume was injected subcutaneously under the scar in the lower eyelids to produce a bleb. The filler was left in place for 5.5 months and then completely dissolved with 750 i.u. / 2ml of hyaluronidase per eyelid (Desinfiltral, Aesthetic Dermal, Girona, Spain).

**Results:** The average preoperative MRD-2 was 8.4 mm and decreased to 6.0 mm immediately after filler injection. Lagophthalmos and exposure keratopathy completely resolved. The filler produced a compact bleb with Tyndall effect. One week after the filler was dissolved, the average MRD-2 was 6.08 mm. The MRD-2 increased to 6.68 at the time of the last postoperative visit, 5 months after the filler was dissolved, but the patient remained asymptomatic and there was no recurrence of either the keratopathy or the lagophthalmos.

**Conclusion:** The volumizing hyaluronic acid Belotero Volume can be used effectively as tissue expander for the lower eyelid skin. The reduction in MRD-2 was 2.4 mm with the filler in place and 1.72 mm at 5 months after filler dissolution. There was a complete resolution of the signs and symptoms of corneal exposure.

**Keywords:** cicatricial ectropion, hyaluronic acid, tissue expander, hyaluronidase, Belotero Volume

**Bibliography:**1. Nonsurgical treatment of cicatricial ectropion with hyaluronic acid filler. Fezza JP. *Plast Reconstr Surg.* 2008 Mar;121(3):1009-14. 2. Nonsurgical management of congenital eyelid malpositions using hyaluronic Acid gel. Taban M, Mancini R, Nakra T, Velez FG, Ela-Dalman N, Tsirbas A, Douglas RS, Goldberg RA. *OPRS.* 2009 Jul-Aug;25(4):259-63. 3. Treatment of lower eyelid retraction by expansion of the lower eyelid with hyaluronic Acid gel. Goldberg RA, Lee S, Jayasundera T, Tsirbas A, Douglas RS, McCann JD. *OPRS.* 2007 Sep-Oct;23(5):343-8. 4. Use of hyaluronic acid gel in the management of cicatricial ectropion: results and complications. Romero R, Sanchez-Orgaz M, Granados M, Arbizu A, Castano A, Romero A, Molia P. *Orbit.* 2013 Dec;32(6):362-5.