

EFFECT OF INCOBOTULINUM TOXIN-A (XEOMIN®) FOR THE TREATMENT OF OBSTRUCTIVE AND FUNCTIONAL EPIPHORA: A SHORT-TERM PILOT STUDY

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INTRODUCTION AND OBJECTIVES

Epiphora is a frequent disease in Ophthalmology that leads to impairment in quality of life of the patients. Its standard treatment is surgical in the form of DCR (dacryocystorhinostomy) and even Jones tube intubation insertion depending upon the location and extent of obstruction. Injection of botulinum toxin A (BoNTA) in the lacrimal gland blocks the presynaptic release of acetylcholine, which is required for tear secretion. BoNTA has been successfully used to treat excess tear production in the setting of gustatory hyperlacrimation owing to aberrant regeneration in proximal facial nerve injuries. A few publications report its use in the treatment of either functional epiphora or lacrimal obstruction (1-2).

The objective was to investigate the short-term efficacy and safety of Incobotulinum toxin-A (Xeomin®) treatment for functional and obstructive epiphora.

METHODS

- Prospective pilot study.
- 12 female patients (mean age 60.4 [range 46-80 years]) from November 2015 to June 2016.
- A total of 16 Incobotulinum toxin-A injections (4 patients received injections in both eyes).
- 50% canalicular obstruction and 50% functional epiphora.
- Patients received 5U/0.05 ml incobotulinumtoxinA in the lacrimal gland of the affected eye. Figure 1.



Figure 1.

Evaluation of epiphora before intervention and at 2 and 6 weeks post-treatment was with:

- Munk epiphora grading. Figure 2
- Specific questionnaire of vision-related quality of life (QoL). Figure 3.
- Schirmer test. Figure 4

Side effects were also recorded.

Munk epiphora grading: Number of times a day the patient reported dabbing away tears:

- 0 = no epiphora
- 1 = dabs <2 x day
- 2 = dabs 2-4 x day
- 3 = dabs 5-10 x day
- 4 = dabs > 10 x day

Figure 2.



Figure 4.

QoL. Frequency of discomfort for daily activities. Scale of: 0 (never), 1 (sometimes), 2 (frequently), 3 (almost always), 4 (always):

- Reading
- Daytime driving
- Nighttime driving
- Working at a computer
- Watching TV
- Work-related activities
- Household activities
- Outdoor activities
- Interpersonal relations
- General happiness

Figure 3.

RESULTS

Munk score and QoL score significantly improved at week 2 and 6 post-treatment compared to baseline. A significant decrease of mean Schirmer test scores was also observed at week 2 and 6 (Figure 5). In terms of safety, four patients (33.3%) experienced mild ptosis that improved after 5 weeks (Figure 6) and 1 patient also experienced non-disabling diplopia that disappeared at week 6.

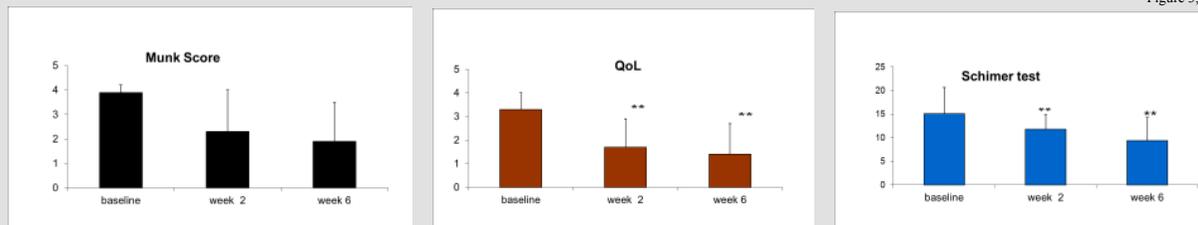


Figure 5. Munk scores, Vision-related quality of life (QoL) questionnaire and Schirmer test before and after Incobotulinum A toxin treatment (week 2 and week 6). **p<0-001 vs baseline.



Figure 6.

CONCLUSIONS

This pilot study provides further evidence to the scarce literature supporting the value of BoNTA in the non-surgical treatment of patients with epiphora. Our results show favourable outcomes with Incobotulinum toxin-A injections in terms of efficacy and tolerability in patients with obstructive or functional epiphora. Controlled studies in larger populations are required to confirm these results.

REFERENCES

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