



Photophobia and sensations of dryness in migraine patients occur independent of baseline tear volume and improve following botulinum toxin A injections

SCIENCE

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Key Take-Away:

This retrospective review by Ryan J Diel et al. depicted that photophobia and dry eye symptom improvement after administration of BoNT-A injections in patients treated for migraine pain occurred independent of baseline tear volume at the baseline. The modulation of shared trigeminal neural pathways may play a crucial role in the same.

Introduction:

To examine the efficacy of botulinum toxin A (BoNT-A) in decreasing photophobia and dry eye symptoms in patients with chronic migraine. Also, the investigators focused on evaluating tear film volume as a promising contributor to the symptoms in these migraine patients.

Methods:

Retrospective review of 76 patients who received BoNT-A for chronic migraine between 23 August 2017 - 13 December 2017 at the Miami Veterans Affairs Medical Center Neurotoxin Clinic. The demographic data and all comorbidities were queried using the chart review. Standardised validated surveys were administered to evaluate the symptoms before and after BoNT-A injection. Preinjection tear volumes were obtained via the phenol red thread (PRT) test.

Results:

Preinjection migraine, dry eye symptom scores and photophobia were all significantly correlated, and none were concerned with the preinjection PRT results. After the BoNT-A, improvements in migraine, photophobia and dry eye symptoms were also significantly correlated and similarly did not relate with preinjection PRT results. Photophobia scores improved substantially after BoNT-A, whereas dry eye symptoms notably improved in those with severe symptoms at baseline (DEQ-5 score ≥ 12). In the logistic regression analysis of all individuals with dry eye symptoms (DEQ-5 ≥ 6), the individuals experiencing more severe dry eye symptoms were more likely to improve, OR 1.27, 95% CI 1.06 to 1.51.

Conclusions:

BoNT-A significantly improved photophobia in patients for migraine treatment. It also improved dry eye symptoms in patients with severe symptoms at the baseline, not considering the baseline tear film volume. These improvements maybe because of the modulation of shared trigeminal neural pathways.

Source

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Link: <https://www.ncbi.nlm.nih.gov/pubmed/30269099>

Original title of the article: Photophobia and sensations of dryness in patients with migraine occur independent of baseline tear volume and improve following botulinum toxin A injections

Authors: Ryan J Diel et al.

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