

Letters

Topical Anesthetics in Treatment of Corneal Abrasions in the Emergency Department

Corneal abrasions are among the most common ophthalmologic issues treated in the emergency department (ED)¹ and can be difficult to symptomatically manage due to the associated pain.

We have noted an increasing number of patients who arrive in our clinic with tetracaine and proparacaine prescriptions that were provided in the ED. At our institution, when polled, 24% of emergency medicine providers answered that they would prescribe a topical anesthetic for a corneal abrasion.

The use of topical anesthetics is traditionally discouraged by ophthalmologists due to numerous reports of severe complications after long-term use.² However, clinical trials have demonstrated the safety of short-term topical anesthetics use after photorefractive keratectomy (PRK).³ Trials in the emergency medicine literature also support the safety of short-term topical anesthetic use.⁴

Unfortunately, the controlled use of topical anesthetics in trials does not reflect usage in the “real world.” Prescription of a full 1-mL bottle of anesthetic, the smallest size available at our institution, provides a patient with 200 drops, or 50 days’ worth of supply if used four times daily. Prescription of anesthetics also disincentivizes follow-up.

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ED health professionals must be alerted to the severe consequences of topical anesthetic abuse. We suggest the following approach using the mnemonic of the three “A”s:

- **Alternatives:** ointments (like erythromycin) reduce friction between the eyelid and cornea and should be first-line agents for pain before topical anesthetics. Alternatives like bandage contact lenses may be considered after referral to ophthalmology.
- **Amount:** if anesthetic drops are being considered, based on clinical trial data, patients should be given only enough drops for 24 hours.
- **Appointment:** scheduling for outpatient follow-up is crucial to ensure resolution.

We held a joint conference with the ED at our institution to improve communication and education on this topic. Additionally, we created shareable smart phrases with the three “A”s in the EMR. This improved awareness; 75% of emergency

medicine health professionals were able to identify appropriate alternatives to anesthetics after the conference and EMR update compared with 53% prior.

Overall, the use of topical anesthetics in the treatment of corneal abrasions is disputed but keeping open communication between emergency medicine and ophthalmology is crucial to ensure patient safety.

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1 Channa R et al. *JAMA Ophthalmol*. 2016;134(3):312.

2 Epstein DL et al. *N Engl J Med*. 1968;279(8):396-399.

3 Verma S et al. *Eur J Ophthalmol*. 1997;7(4):327-333.

4 Waldman N et al. *Acad Emerg Med*. 2014;24(4):374-382.

Concerns About Pediatric Ophthalmologist Access Study

The Journal Highlights section of the April *EyeNet* featured a *JAMA Ophthalmology* article detailing limited access to pediatric ophthalmologists in the United States.

We have three concerns about the design of that study. First, it relied solely on data from our society, the American Association for Pediatric Ophthalmology and Strabismus (AAPOS), and we know that these data are an underestimate. For example, the study stated that four states have no pediatric ophthalmologists, which is incorrect. Second, the study assigned only one location to each ophthalmologist, omitting satellite locations. Third, the study compared different datasets over time (county-level vs. historic metropolitan statistical area data).

While we wholeheartedly agree with the conclusion that there is a need to address this critical pediatric ophthalmology workforce concern, we encourage future study authors to utilize more accurate methods to detail the nature and extent of the problem.

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A True Patient Encounter

A patient came to me telling me that when he looks at the moon, he sees a crescent of light around it. “Only when you look at the moon?” I inquired. He nodded. “When the moon hits your eye like a big pizza pie?” I pursued. He looked at me expectantly, “I know what that is, sir—that’s amore.”

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