Letters

How to Administer Timolol for Treatment of Acute Migraine

Ophthalmologists frequently see patients who experience visual symptoms from acute migraines. So we were happy to see a summary of a *JAMA Ophthalmology* study on the repurposing of timolol for acute migraine in the December Journal Highlights. This study is a major contribution toward an inexpensive first-line treatment for this disease. It is the first moderately large, randomized, controlled trial that convincingly demonstrates the efficacy of timolol 0.5% beta-blocker eyedrops in treatment of acute migraine.

In a 2014 case series, we reported seven patients who successfully used timolol 0.5% eyedrops instilled at the first sign of an acute migraine, and we stressed the need for randomized controlled trials.[1] Eyedrops, although effective, were sometimes difficult for the eyedrop-naive patients in our case series to administer, especially if they had a migrainous visual aura. Since mucosal absorption is the primary route for rapid therapeutic blood levels, we suggested that sublingual or nasal administration should work, as well.

Our clinical experience has found sublingual dosing to be effective for acute migraines.[2] Although a nasal spray for timolol is not commercially available, it is easily compounded and inexpensive.[3] Sublingual and nasal administration have not been vetted with rigorous research, but our clinical experience suggests that they may equal or surpass eye application because they directly target larger mucosal surfaces and are easier to administer.

We hope larger randomized controlled studies will further explore inexpensive treatments for acute migraines. As migraine is the leading neurological disease in the world, an inexpensive, easy to administer, and effective treatment could potentially help millions of patients around the globe.

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1 Migliazzo CV, Hagan JC III. *Mo Med.* 2014;111(4):284-289.
2 Migliazzo CV, Hagan JC III. *Mo Med.* 2018;115(6):508-509.
3 Hagan JC III et al. *Int J Pharm Compd.* 2020;24(3):194-197.

Can Your Patients Hear You?

Because of mask use during the COVID-19 pandemic, deaf and hard-of-hearing (DHoH) people face unique challenges. From reduced sound transmission to loss of visual cues, masks create barriers to communication for DHoH people. This issue is particularly acute for ophthalmologists since they see many elderly patients, who are more likely to have hearing issues. Taking a few steps can be helpful.

Be vigilant in accommodating DHoH people. Ophthalmologists should check frequently for comprehension and allot extra time for counseling, allowing for a companion if needed. Additionally, the value of a printed summary or educational material cannot be understated.

Provide an interpreter for patients who use sign language. Physicians should not rely solely on text to communicate with patients for whom American Sign Language (ASL) is the primary language, as there is not a perfect word-to-word translation from English to ASL. Similarly, one should familiarize interpreters with relevant medical vocabulary. Some commonly used terminology in ophthalmology does not translate smoothly into sign language.

Use assistive devices. Computers and smartphones can be used to display pictorial reinforcement of topics. When text is appropriate, a light-writer is an inexpensive, portable device that allows for text communication one line at a time. Patients should also be asked if they use assistive hearing devices like hearing aids or cochlear implants, as these devices may improve communication.

Learn to adapt the exam for DHoH people, especially those with low vision. Refraction can be performed with retinoscopy and autorefractors. The slit-lamp exam can be directed by hand gestures or gentle tapping on specific regions of the patient's orbit to indicate gaze direction. Tactile sensation may be particularly useful during the dilated exam when bright lights further reduce visual cues. Physicians can become acquainted with a few simple ASL signs including "look here" and "place your chin here with forehead against the bar." A trusting relationship can be cultivated when physicians practice cultural competency and patients realize that their doctors are willing to use a few signs.

Use a clear mask, if possible. Clear masks may improve visual cues. However, only a few companies produce clear masks with FDA clearance for medical use, and these masks are not widely available. If homemade masks are used, the CDC recommends the concomitant use of a face shield.[1]

The additional chair time required to communicate with DHoH patients is inconsequential relative to the ultimate goal of the preservation of vision and may ultimately help improve health outcomes for this population.

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1 CDC. Coronavirus Disease 2019 (COVID-19). Strategies for Optimizing the Supply of Facemasks 2020; www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/face-masks.html. Accessed Oct. 25, 2020.