the venous tributary that bridged the watershed zone—the tributary connecting the inferotemporal branch retinal vein to the central retinal vein—was very slow (Figure 2B). The slow blood flow made that blood vessel susceptible to venous stasis-induced thrombosis, narrowing, and subsequent partial occlusion.

This case illustrates retinal venous remodeling over time in response to modification of the retinal circulation.

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**Online-Only Material:** The video is available at http://www.jamaophth.com.


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**Inferior Oblique Myokymia: A Unique Ocular Motility Disorder**

Superior oblique myokymia is a well-described disorder in which patients have monocular, high-frequency, low-amplitude contractions of the superior oblique muscle producing torsional or vertical oscillopsia. These episodes often last seconds to hours and can occur several times a day. These movements can sometimes be induced by infraduction but otherwise occur spontaneously. The etiology of this disorder is unknown, although it is almost always benign. In recent years, some have suggested that superior oblique myokymia is due to vascular or nonvascular mechanical compression of the trochlear nerve at the root exit zone or is a primary brainstem disorder.1-5 However, in the vast majority of cases, no underlying cause is ever found. The clinical course is highly variable, ranging from spontaneous recovery to chronic oscillopsia and diplopia.6 Several therapies have been tried with varied success, including topical β-blockers, carbamazepine, phenytoin, baclofen, gabapentin, and, in severe cases, incisional surgery.1 We describe a unique form of myokymia involving monocular, high-frequency, low-amplitude contractions causing excyclotorsion, not incyclotorsion, induced by supraduction, suggesting an inferior oblique myokymia. Based on a PubMed search, this has not been described in the literature to date.

**Report of a Case.** A 59-year-old man initially presented to our neuro-ophthalmology unit in 2003 with a 2-month
history of brief episodes, lasting 30 seconds to 10 minutes, in which his right eye would quiver. During his initial evaluation, the patient was unable to reproduce the twitching movement. His symptoms were attributed to superior oblique myokymia based on his description of vertical jumping of his eye producing vertical oscillop sia. The patient was reassured that his condition was benign given the absence of other neurological features. He began treatment with gabapentin and was then lost to follow-up.

The patient did not return until 2011, when the episodes started to become more frequent, occurring 5 out of every 7 days. During this visit, he was able to reproduce the eye movement disorder by supraduction, causing an excyclotorsion, lasting about 1 minute (video, http://www.jamaophth.com). This is the opposite of what is expected for superior oblique myokymia, in which infraduction triggers incyclotorsion. The decision was made to perform 1.5-T magnetic resonance imaging of the brain and orbits given that this type of movement had not been described in the literature and the patient had a significant medical history, including human immunodeficiency virus and factor 11 deficiency. The patient contracted human immunodeficiency virus from a contaminated blood transfusion in the early 1980s and was being treated with 2 forms of antiretroviral therapy, emtricitabine/tenofovir and raltegravir. After normal findings on magnetic resonance imaging, he began treatment with timolol maleate, which provided no relief. The patient more recently tried oxcarbazepine, with no improvement initially.

Comment. We describe a patient with intermittent, monocular excyclotorsion induced by looking up and out, all consistent with inferior oblique myokymia. This observation raises a number of interesting questions. In patients in whom a diagnosis of superior oblique myokymia is made clinically, as in our patient at his initial visit 8 years earlier, is inferior oblique myokymia actually the correct diagnosis?

The etiology of superior oblique myokymia is uncertain, with reports suggesting vascular compression of the trochlear nerve, direct involvement of the muscle, and brainstem disorders. In our case, there was no abnormality of other oculomotor nerve functions, perhaps lending support to this being a primary muscle problem.

In patients with a clinical history consistent with an ocular muscle myokymia and normal findings on examination, we suggest having the patient look up and out as well as up and in to try to provoke inferior oblique myokymia.

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COMMENTS AND OPINIONS

Nonmydriatic Digital Ocular Fundus Photography With iPhone 3G

We read with great interest the article by Lamirel et al1 in the July issue regarding the utility of the iPhone 3G (320×480 resolution; Apple Inc) for reviewing nonmydriatic color fundus photographs. The study raises important considerations for the use of mobile technology in settings where access to sophisticated photographic equipment is limited.

A large proportion of the nonmydriatic camera images were inadequate for clinical use. The authors specified that of the 100 selected images, 50 were inadequate to exclude emergent pathology. This is a limitation of the quality of nonmydriatic photographs obtained in the first place using the Kowa α-D camera and not the iPhone per se. Nevertheless, the authors were able to show that there was excellent interreviewer and intraviewer agreement of image quality between the desktop computer and the iPhone display. This in itself is a validation of their rating scale and an initial indicator of agreement between iPhone displays and desktop screens. However, the inference from this study is that retinal images can be assessed in a telemedicine network with comparable accuracy on an iPhone screen, thereby facilitating rapid identification of emergent pathology. Certainly, the promising results would have been enhanced by obtaining higher-quality images to be transferred and read on the iPhone in the first place. It would be interesting to see a future study from this group comparing diagnoses made when using high-quality images.

The use of smartphones as a diagnostic aid has been demonstrated in nonophthalmic specialties such as radiology. The authors make reference to an excellent study by Modi et al,2 who demonstrated a sensitivity of 80% and specificity of 97% in detecting vertebral body fractures on computed tomographic scans on an iPhone by 2 independent radiologists. More recently, Padmasekara et al3 found the iPhone 3GS camera (3.2 megapixels) to be adequate for the interpretation of distal ra-