

# Expert Opinion

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## Monocular Visual Aura With Headache: Retinal Migraine?

*Case History and Follow-up Submitted by Randolph W. Evans, MD*

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Unilateral visual symptoms and headache in a woman without a history of migraine pose several difficult questions with regard to investigations, diagnosis, and management.

### CLINICAL HISTORY

A 38-year-old woman developed a mild pressure sensation behind the right eye that did not improve with sinus medications. After a constant mild headache (2 of 10 in intensity) for 4 days, she developed a visual disturbance in the right eye only. (She performed a cover-uncover test on herself.) The visual complaint began with a pinpoint colored kaleidoscope in the center of her vision for 15 minutes, which expanded with a tail for about 15 minutes, and then enlarging swirls involved the entire visual field of the right eye lasting for about a half hour. The swirls then suddenly went away without breaking up. Normal vision returned and has persisted since. As the swirls enlarged, the right retro-orbital pain intensified and become sharp (8 of 10 in intensity) for about 2 hours and 45 minutes. When the swirls resolved, the headache became mild again and resolved completely about 5 hours later. The patient had no other associated neurological symptoms. The only headaches she had ever previously had were of the hangover type following excessive alcohol intake. She drinks a glass of red wine daily. Her family history is negative for migraine. She has no history of hyperten-

sion, hyperlipidemia, diabetes, or heart disease. She had been on a diet for 2 months with a 22-lb weight loss while taking diethylpropion, 25 mg, three times a day.

The findings of a general physical examination were normal, as was her blood pressure. The carotid pulses were 2+ and symmetrical without bruits. She had a regular cardiac rhythm without a murmur or click. The results of the neurological examination were normal. The findings of an ophthalmological examination by a retina specialist were normal.

**Questions.**—What is the diagnosis? What, if any, diagnostic testing should be performed?

### EXPERT COMMENTARY

I could state simply that this young woman, with no risk factors for occlusive vascular disease, developed a monocular visual disturbance associated with ipsilateral headache, which I could call “retinal migraine.” However, I have never encountered retinal migraine, or any retinal vascular event, with the type of complex visual hallucination usually associated with occipital lobe dysfunction in migraine with aura (classic migraine). If the patient had not self-performed a cover-uncover test, I would confidently contend that she, as do many patients, misinterpreted a hemianopic phenomenon as monocular. Hemianopia involves the nasal field of the eye ipsilateral to the dysfunction and the temporal field in the contralateral eye. The temporal field is over twice the size of the nasal field, and even highly intelligent patients attribute hemianopic defects to the eye (contralateral to the lesion) with the involved temporal field.

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Most retinal migraines involve negative symptomatology (loss of vision), rather than the positive event experienced by this patient. Thus, I presented the patient's history to seven senior neuro-ophthalmologists and, as might be expected, the opinions as to the visual dysfunction localization varied from "The sensation had to come from the retina" to "This does not sound retinal. I have had patients swear that they had monocular classic migraine, and I think they either didn't cover-uncover, as they said, or they were taking editorial license."

Although this may have been classic migraine with prolonged aura (in about 40% of cases, the headache is ipsilateral to the aura and contralateral to the occipital dysfunction), for the sake of discussion, I will assume it was a monocular retinal event.

The role of vasoconstriction induced by the patient's sinus medication and possibly the diet drugs must be considered, and I would advise her to avoid sympathomimetic drugs in the future. As a workup, I would obtain a complete blood count, erythrocyte sedimentation rate, and antinuclear and anticardiolipin antibodies. If these studies were negative, I would not prescribe any medication to either prevent or treat a future occurrence. However, if the patient had another event, I would try to see her in the office while she was symptomatic, to examine her acuity, pupils, visual fields, and fundus. This would clarify whether the event was hemianopic or monocular and, if the latter, might disclose retinal vasospasm. If she had recurrent episodes that were strictly monocular, I would place her on prophylactic verapamil.

Bruno et al<sup>1</sup> is a good reference for transient monocular visual loss. Unfortunately, I cannot recommend a good reference on "retinal migraine." Most reported series erroneously attribute any enigmatic monocular visual disturbance in a young person to "retinal migraine," but such episodes are better designated "vasospastic amaurosis fugax."<sup>2</sup> I discuss this in a book chapter to be published in 2000.<sup>3</sup>

## REFERENCES

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## FOLLOW-UP

Magnetic resonance imaging (MRI) of the brain was normal except for a mild Chiari I malformation. A carotid ultrasound study was normal. A complete blood count and platelets were normal. The erythrocyte sedimentation rate was 1 mm/h. Antinuclear antibodies and rheumatoid arthritis factor were negative. Anticardiolipin antibodies (IgG 3 [negative], IgM 13 [positive >10], IgA 8 [negative]), prothrombin time, and partial thromboplastin time were normal.

The patient was advised to discontinue diethylpropion. In view of the mild elevation of the IgM anticardiolipin antibodies, she was prescribed acetylsalicylic acid, 81 mg, daily.

## INVITATION TO SUBMIT CLINICAL DILEMMAS

The "Expert Opinion" section of *Headache* is edited by Randolph W. Evans, MD who invites readers to submit clinical problems, case reports, or other headache-related questions for commentary by one or more experts. Comments on the expert's opinion as letters to the editor are also welcome.

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