

Case 5

History of Present Illness

A 56-year-old woman noted left, intermittent periorbital and orbital pain for 7 months. It occurs suddenly and can wake her from sleep. However, it occurs at all times of the day approximately twice weekly, lasting 30–120 min. She denies a trigger. She endorses a history of temporal mandibular joint issues and believes this is related. Blurred vision coincides with the eye pain each time and she notes mild nausea and photophobia, but denies osmophobia or phonophobia. The blurry vision does not occur independent of the eye pain. She denies seeing sparkles or lights. She has a history of severe diabetic retinopathy status post vitrectomy in the right eye 2 years ago. Her right upper lid has drooped since that surgery. She has had extensive laser for neovascularization related to the diabetes to both eyes.

<i>Past medical and ocular history</i> Diabetes mellitus Addison disease Hyperlipidemia Hypertension Agoraphobia with panic disorder No history of migraine	<i>Past surgical history</i> Kidney transplant 1984 Pancreas transplant 2002 Heart bypass 2001
<i>Social history</i> Unemployed, never smoked, former alcoholic	<i>Family history</i> No eye disease Strong family history of diabetes, hypertension, and hyperlipidemia No family history of migraine

<i>Medications</i>	<i>Review of systems</i>
Hydrocortisone	Earaches from the wind
Prograf	Shortness of breath
Cellcept	Constipation
Actonel	Joint pain
Aspirin	Itchy skin
Atenolol	Depressed mood
Diazepam	Easy bruising
Percocet	Numbness of hands and feet
Prozac	Difficulty walking from leg weakness
Lipitor	

Examination

Acuity with correction

Right eye: 20/200

Left eye: Hand movements; near vision 20/40

Pupils

Constricted, barely reactive, round, equal in size

Intraocular pressure

Right eye: 16 mmHg

Left eye: 19 mmHg

External exam

Symmetric ptosis and dermatochalasis of both upper lids

Eye movement/alignment

Normal

Slit lamp examination

Chronic blepharitis all four lids

Intraocular lens right eye, dense cataract left eye with

Phacodonesis

No evidence of rubeosis

Anterior chamber: Deep right eye, shallow left eye

Visual field

Constricted right eye, unable left eye

Fundus examination

Optic nerve pallor both eyes

Numerous and dense laser scars both eyes

Neurologic examination

Numbness both feet, 4/5 strength in legs, poor proprioception of toes bilaterally

Discussion

Ophthalmic Perspective: Dr. Lee

This patient sounds like she could have migraine (see Case 19)—she has episodic eye pain associated with concomitant blurred vision, nausea, and photophobia. The pain is side locked. However, she is older than the average bear to have first onset migraine and does not have a history of migraine. The story is funny in that

Table 5.1 Drugs causing angle closure glaucoma

Tricyclic antidepressants
Non-tricyclic antidepressants (e.g., escitalopram, fluoxetine, mirtazapine, venlafaxine, bupropion)
Anticholinergics
Acetazolamide
Topiramate
Promethazine
Ranitidine
Cabergoline
Cimetidine
HCTZ

she notes the blurred vision and eye pain begin at the same time and are of sudden onset plus they can wake her from sleep. Auras usually take minutes to reach a peak. Her acuity is better at near than at a distance—and this is induced myopia that she never had before. When one looks at her physical examination, she has a shallow anterior chamber in the left eye along with phacodonesis (excessive movement of the lens).

The history and exam are certainly consistent with intermittent angle closure glaucoma (ACG). She denies a trigger; however one should inquire about whether sudden exposure to light, lying down, or taking medications (anticholinergics, antidepressants, antihistamines, and adrenergics) seems to initiate these attacks. She happens to be on fluoxetine (Prozac), which has been associated with ACG. See Table 5.1. Risk factors for angle closure include female gender, smaller eyes (hyperopia), older age, and Asian or Indian descent, topiramate use. She denies red eye or tearing, but these can accompany ACG. Normally, we think of acute ACG as a one-time event, where the patient presents to the ER with prolonged eye pressure elevation that does not remit until the patient receives drops, lasers, or surgery. In some cases, the angle can open and the pressure comes down spontaneously and recurs intermittently as in this case. We have seen intermittent ACG misdiagnosed as migraine by neurologists because of the similarities in historical features.

These patients should be instructed to avoid provocative medications and to have a laser peripheral iridotomy to prevent further attacks. In some cases, if the lens is very large, cataract extraction may be necessary.

Neurologic Perspective: Dr. Digre

This is a new headache in an older woman. Anyone presenting with a new headache needs to be evaluated for a secondary cause, especially when she never really had headaches before. The visual blur and pain would suggest to the neurologist that there may be an ocular problem (e.g., corneal erosion (see Case 2)) and that the patient should be seen by an ophthalmologist.

The temporal mandibular joint (TMJ) dysfunction confounds the history as well. TMJ is diagnosed when someone has demonstrated joint disease that is demonstrated by imaging and/or clinical examination—for example, the individual cannot open the mouth more than 2–3 fingerbreadths. The pain is usually associated with jaw movements, which is not part of the history here. TMJ dysfunction is greatly over-rated and while she may think this is the cause—look for another cause. The nocturnal waking could suggest hypnic headache especially in an older person, but we are told this pain comes at all times of the day and night.

For sure, this woman should have a good eye examination—and I would definitely want a slit lamp examination since her acuity is down 20/200, hand motions PLUS she has diabetes. Too many red flags here for my liking. The ophthalmologist finds a narrow angle on the left side. This could suggest angle closure.

Differentiating migraine and intermittent acute angle closure can be tricky. If this woman had a previous migraine history, we might have thought she had migraine as the cause of pain. The clues for me that this is not migraine is that it occurs in the same eye and that the blur and the pain are simultaneous. Migraine aura is not typically just a blur—it often as a progression over minutes and it occurs in both eyes. Aura is often colored or has zig-zag lines and often the pain will occur after the visual disturbance. The nausea with the pain can also confuse the neurologist since we usually associate nausea with migraine. The only other thing to worry about is ocular ischemia that could cause pain and visual blurring. A fluorescein angiogram may be helpful looking at an arm to retina time. Finally, always consider giant cell in any older individual with a new headache (see Case 32).

Non-ophthalmic/Non-neurologic Perspective

The history will be essential in distinguishing ACG and migraine. There may be an atypical feature that may guide you. Most patients with migraine experience the blurred vision of an aura before the pain begins. The blur usually progresses over minutes and subsides over minutes. Typically, the aura of migraine lasts less than an hour. However, a new headache in an older person should always alert you that there could be a secondary cause. Keep in mind that migraine is common and intermittent ACG is uncommon.

You can also take a penlight and shine it from the side of the anterior chamber parallel to the iris. If the chamber is deep, then the light will uniformly illuminate the iris. If the chamber is narrow, it may cast a shadow on the nasal side of the iris (Fig. 5.1).

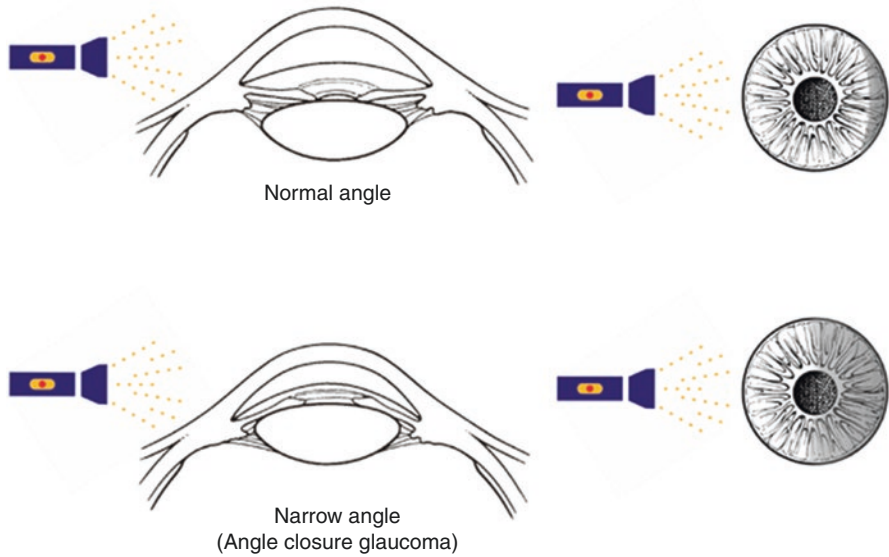


Fig. 5.1 Shining a light from the side in a normal angle will produce no shadow. If the angle is shallow, there may be a shadow. From Digre and Corbett, *Practical Viewing of the Optic Disc*. Butterworth-Heinemann, 2001 (with permission)

Follow Up

Compression gonioscopy showed an occludable (appears closed, but can open the angle with pressure) anterior chamber angle with areas of peripheral anterior synchia. She was diagnosed with intermittent angle closure glaucoma likely related to the mobile lens in the left eye. The patient underwent laser peripheral iridotomy (LPI) followed by uncomplicated cataract extraction. The episodic eye pain resolved after the LPI. *Final diagnosis: Intermittent angle closure glaucoma.*

For Further Study

1. Lewis J, Fourman S. Subacute angle-closure glaucoma as a cause of headache in the presence of a white eye. *Headache*. 1998;38:684e.
2. Murphy RM, Bakir B, O'Brien C, Wiggs JL, Pasquale LR. Drug-induced bilateral. Secondary angle-closure glaucoma: a literature synthesis. *J Glaucoma*. 2016;25(2):e99–105.
3. Shindler KS, Sankar PS, Volpe NJ, Piltz-Seymour JR. Intermittent headaches as the presenting sign of subacute angle-closure glaucoma. *Neurology*. 2005;65:757–8.