Migraine with unilateral mydriasis

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A 54-year-old, post-menopausal woman has had migraine headaches since the age of 40, occurring about once per month, responding well to sumatriptan. She experiences a stabbing pain in the left eye and left side of head, associated with nausea and vomiting. The pain has only affected her left side but a brain MRI was normal. She has an aura of blurred vision in the left eye alone, seeing images as if through a broken glass, with shimmering lights but no scotoma. She experienced a headache at work and a co-worker noticed her left pupil to be markedly dilated (see photo). Her medical history was otherwise unremarkable. She does not know if she’d had a dilated pupil previously. Her neurological and funduscopic exam, after the episode resolved, were normal. She takes thyroid supplement as her only medication.

Benign episodic unilateral mydriasis [1] is due either to sympathetic overactivity, causing increased dilatation, or parasympathetic underactivity, causing decreased contraction. No other third-nerve symptoms had been present (ptosis or eye movement limitations that would cause diplopia). The association with recurrent migraines, previous normal brain MRI, absence of other neurological symptoms and complete resolution limit the diagnosis to a benign process.

Probably the most common cause for episodic unilateral mydriasis is due to handing a scopolamine patch then touching one eye.

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References