Acute Vision Loss In An 11 Year-Old Female
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Introduction

Functional vision loss is a non-specific term that includes both dissociative and somatiform disorders. One of these is conversion disorder, which presents with acute neurological symptoms secondary to psychosocial stress. This disorder is a subconscious manifestation of nonorganic signs and symptoms. Historically referred to as hysterical blindness, this subtype of conversion disorder manifests as vision loss.

A study from the Albany Department of Ophthalmology found that hysterical blindness occurs predominantly in females ages 7-16. Hysterical blindness in children is usually in association with social or emotional stressors, whereas in adults, it is usually related to trauma. Children also have a much higher chance of full recovery. The Albany study also found that in 78% of the patients, the vision loss resolved within 3 months, headaches were the most common associated symptom, and conflicts in the family or school environment were common.

There are several ways to differentiate hysterical blindness from malingering. Electrophysiologic testing, the mirror test, and optokinetic drum testing are most useful when there are claims of total blindness in one or both eyes. The Walter Reed Army Medical Center found that visual field defects were more common in patients with hysteria versus patients that were malingering, as malingers usually claim total vision loss.

Case Description

Just before her birthday, an 11 year-old white female presents with acute onset vision loss in the left eye when she woke up in the morning. She describes it as “looking through a tube.” She complains of deep, boring, left eye pain that is constant, but worse with eye movement. Ibuprofen has not helped. She has had new onset, intermittent headaches.

• PMHx: Wears braces
• PPHx: Obesity, HTN, DM, HLD, MS, and Idiopathic intracranial hypertension (Pseudotumor cerebri)
• Social Hx: Has a twin sister, denies drug use
• Vitals and complete physical within normal
• DVA/Dve: 20/20 OU; IOP: 15/16
• EOM’s intact, Ortho, Full to confrontation OD, Restricted field OS
• Pupils: PERRL, Negative APD OU
• Slit Lamp Exam: All within normal limits
• DFE: C/D 0.2 OU, No disc edema OU.

Visual Fields

- 30-2 OS:
  - 30-2 OD:

Differential Diagnosis

- Idiopathic Intracranial Hypertension
- Optic neuritis
- Multiple sclerosis
- Functional Vision Loss
- Factitious Disorder
- Conversion Disorder
- Hysterical Blindness
- Intracranial tumor
- Amaurosis fugax
- Vascular event
- Intermittent angle closure glaucoma
- Compressive optic neuropathy
- Malingering

Ancillary Testing

- • Color Plates: 15/15 OU
- • Stereopsis: 40 seconds of arc
- • Lab Work: Within Normal Limits
- • MRI: “Evaluation of the paranasal sinuses and orbits is completely obscured due to artifact from the patient’s braces. The Mairdott are clear. Grossly normal MRI of the brain.”
- • Visual Field: The patient had 66% false negatives in the visual field of the left eye. This is excessively high, but in areas of true vision loss, the false negative rate often increases. These results would be very hard to consciously reproduce.

Clinical Course

There were several confounding factors in this case. First, this patient retained partial vision. Second, the family history was worrisome due to MS and pseudotumor cerebri. Third, the patient has a twin and two other siblings, who would also be at risk if the condition was found to be hereditary.

The work-up of this patient was significantly complicated by being conducted across two pediatric ophthalmologic offices, emergency rooms, and two different states. After numerous tests and multiple dilated exams with no conclusive results, the patient was given Polytrim drops, Bacitracin ointment, and IV analgesics to relieve her pain. Because the MRI was inconclusive due to the patient’s braces, removal was briefly considered. During this process, it was discovered that the patient had significant family issues related to the parent’s divorce.

Conclusions & Implications

Hysterical blindness is a psychosomatic condition, with psychological stressors causing physical symptoms. One German study performed functional MRIs on patients with hysterical blindness which showed diminished activity in the areas of the brain relating to the quadrants of visual field loss. After resolution of symptoms, these patients subsequently showed increased activity in the same areas. This is important, because it shows hysterical blindness does have neurophysiological correlates. Knowing this may help patients and their parents understand that this is a real condition and the patients are not “crazy.” Several studies have shown that this reassurance is vital to the patient’s recovery and that formal psychotherapy is not necessary.

Hysterical blindness is a diagnosis of exclusion, and complete ophthalmic examination is required to rule out any pathologic cause. This is especially important in this case due to the many confounding factors. Because of the patient’s family history and this episode of vision loss, she will continue to be monitored closely. As no physical cause was found after extensive testing, and there were significant emotional and environmental stressors discovered, the patient was told, “…sometimes this (the vision loss) happens to people, and the reasons are not always known. However, the vision loss should eventually go away and there is nothing serious to be worried about.” Within 1 month of diagnosis, her vision returned to normal and has remained that way ever since.

References