Diplopia in the Setting of Heroin Withdrawal

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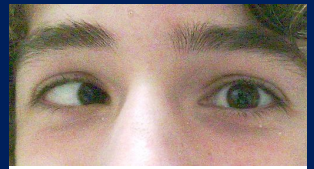
Learning Objective

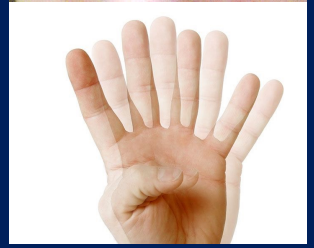
- Recognize the neurological manifestations of opioid withdrawal

Case Presentation

A 35-year-old man with opioid use disorder presented with acute onset binocular diplopia and blurry vision.

- Onset: upon waking, 4 days prior to presentation
- Symptoms: seeing images horizontally next to each other. The double vision disappeared with covering either eye. He denied pain with eye movement, change in color perception, eye redness or discharge, or loss of vision. He also denied dizziness, difficulty swallowing, or new weakness/numbness. There was no recent infection, trauma, sick contacts, or travel history
- Histories: no significant past medical or surgical history.
- Social history: 10 pack years of tobacco, occasional marijuana use, and regular opioid use. The patient began using heroin and fentanyl daily over the past one year and progressed to 10 to 20 bags of heroin or fentanyl intranasally for the last two months. He then stopped using opioids in an attempt to quit 7 days prior to presentation





Clinical Impact

- Heroin withdrawal should be considered on the differential for cases of acute esotropia
- Previously reported cases indicated that this phenomenon may present later than the usual heroin withdrawal signs and symptoms
- In most reported cases, and as seen in our patient, there was no underlying organic neurological etiology identified
- While detailed neurologic and ophthalmologic examination is always warranted in patients presenting with acute esotropia, our case highlights the necessity of a detailed medical and social history to illicit the potential association to opiate withdrawal

Diagnostic Workup

On examination, the patient's uncorrected visual acuity was 20/20 in both eyes. No afferent pupillary defect was noted. Intraocular pressures were 14 mm Hg in both eyes. The slit lamp and fundoscopic examinations were unrevealing. There was a deficient abduction of the left eye, horizontal nystagmus on lateral gaze and vertical nystagmus on upward gaze. Facial sensation was intact to light touch. Facial muscles were symmetric. Hearing was intact to conversation, and the remainder of the neurological exam was normal.

Brain and orbital MRI without contrast showed normal size and appearance of the extraocular muscles, lacrimal glands, and superior ophthalmic veins. There was no evidence of abnormal enhancement of the optic nerve and no evidence of a periorbital mass. There was no evidence of acute brain infarct, hemorrhage, or mass. Patient was discharged home with eye patching and ophthalmology follow-up. The patient then reported that his diplopia and esotropia completely resolved within 10 days after discharge.

Differential Diagnosis

- Stroke: lack of symptomatology, age
- Myasthenia Gravis: lack of ptosis, bulbar signs
- Multiple sclerosis: lack of pain, visual field loss or flashing lights

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