

Oedipism in West Texas: A case series

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ABSTRACT

We report two cases of bilateral attempted self-enucleation with severe sequelae following the traumatic events. Case 1 involves an incarcerated schizophrenic patient who presented multiple times following failed enucleation attempts before finally succeeding with bilateral enucleation. Case 2 is an acutely psychotic individual who successfully enucleated her left eye with attempted removal of the right eye. She developed a massive ischemic stroke immediately following the traumatic event. We discuss complications, management, and prevention.

Keywords: self-enucleation, ocular trauma, enucleation, psychosis, optic nerve avulsion

Oedipism, or self-enucleation, is an extremely rare form of self-mutilation. Patients usually have psychosis from untreated organic disease or drug-induced intoxication.¹ Self-enucleation can have drastic systemic consequences, including meningitis, stroke, and even death.² Here we present two cases demonstrating multiple unexpected sequelae of self-enucleation and its complications requiring multidisciplinary care.

CASE 1

A 29-year-old incarcerated man with a medical history of schizophrenia spectrum disorder and borderline intellectual disability presented following attempted removal of his right eye. He complained of seeing “shadows and evil images” only in his right eye. He was receiving intramuscular fluphenazine 25 mg intramuscular every two weeks for antipsychotic therapy. The most recent dose was three days prior to presentation. Vision in his right eye was 20/100 and 20/20 in the left. He demonstrated full extraocular movements. External examination demonstrated a 2 cm canalicular involving laceration and moderate edema of the eyelids. The

inferior and nasal retina demonstrated extensive commotio retinae. The canaliculus was repaired, and the patient was discharged.

He returned two more times within a week with repeated attempts. After the second attempt, vision was light perception only and the patient played roughly 20 mm of his superior oblique and superior rectus across the globe requiring surgical repair (Figure 1). On the third attempt, he successfully enucleated his entire globe and an extended portion of the optic nerve. He reported he no longer was seeing abnormal images from his eye and denied any desire to enucleate his left eye. He was admitted for prophylactic intravenous antibiotics, inpatient psychiatric evaluation, and surgical closure of his severed optic nerve sheath due to concern for cerebrospinal fluid leakage. Although his psychiatric medication was increased during hospitalization, his outpatient dosing was returned to normal, and he returned approximately one month later after enucleating his left eye.

CASE 2

A 28-year-old woman with a history of substance abuse presented following self-harm behavior, including repeatedly hitting her head and attempted enucleation of both eyes while intoxicated on methamphetamine. On evaluation, the right eye was severely proptotic with

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Figure 1. External photograph of torn extraocular muscles lying across the globe.

lacerations involving 60% of the conjunctiva, and the left eye was completely enucleated. Posterior exam demonstrated mild pallor of her right optic nerve, but an otherwise benign examination. She was taken emergently to the operating room for orbital exploration and repair. Her right eye was retropulsed into the orbit and a prosthesis was placed in the anophthalmic left orbit.

Following surgery, she was difficult to arouse and initially thought to be in a catatonic state given her psychiatric history. Upon further evaluation, she was found to have a massive left sided ischemic stroke involving the anterior cerebral artery and middle cerebral artery distributions (Figure 2). Ultrasound demonstrated a non-occlusive arterial thrombus of the left internal carotid artery. Given her poor predicted outcomes, she was transitioned to comfort care. However, 24 hours

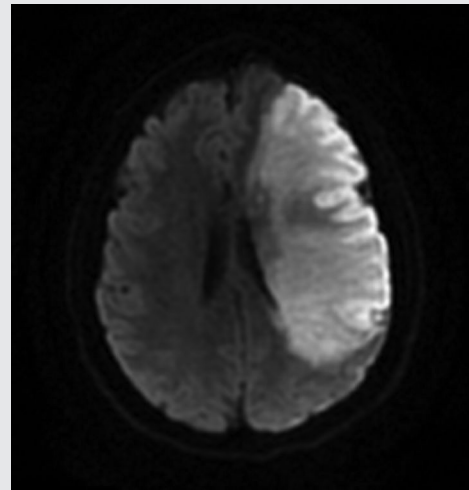


Figure 2. Diffusion-weighted imaging MRI photograph of patient's ischemic stroke.

later the patient awoke with residual right sided hemiparesis and global aphasia.

Following extensive rehabilitation, she returned for follow-up to the ophthalmology clinic. She continued to experience right sided deficits from her stroke and aphasia. Her best corrected vision in the right eye was 20/40, and her external examination was essentially normal.

DISCUSSION

Self-enucleation remains an extraordinarily rare diagnosis, with only about 50 cases published in the literature.¹ Given the severity of this disease, physicians should be aware of emergency management and treatment to prevent further morbidity. Our first case illustrates the necessity for adequate treatment of the patient's underlying psychosis. Despite multiple emergency department visits over repeated attempts, no adjustments were made to the patient's outpatient psychiatric medication, which likely contributed to enucleation of his remaining eye. Both cases help illustrate the breadth of complications in cases of auto-enucleation, including cerebrospinal fluid leaks and stroke.

Oedipism was first described in modern times by Bergman in 1846 and has an estimated occurrence of

1 in 30 million people per year.¹ The underlying etiology of self-enucleation was long thought to serve as a form of self-castration to, as one author put it, destroy the “devilish responsible self and yet live.”³ This is typified by the term Oedipism, in reference to the Greek tragedy, Oedipus Rex, in which King Oedipus gouges his eyes out as penitence for murdering his father and inadvertently marrying his mother. Other recordings of enucleation in history include Norse and Egyptian mythology, Marco Polo’s journal, and stories of Christian saints.³ However, most current literature attributes the disease process to untreated psychosis, as demonstrated by our two patients.

Self-enucleation more commonly involves the right orbit due to hand dominance and demonstrates an equal male to female distribution.⁴ Almost 40% of patients will attempt enucleation of the other eye at some point, as represented by the patient in our first case.⁵ Deliberate orbital injuries are more often directed toward the posterior fossa which differentiates from accidental injuries which are directed superiorly towards the frontal lobe.³

Although injury is mostly limited to the injured orbit, self-enucleation can have multiple consequences requiring a multidisciplinary approach involving internal medicine, psychiatry, neurosurgery, and otolaryngology, in addition to ophthalmology. Initial management should include a computed tomography angiogram of the head/neck to evaluate the ophthalmic and internal carotid arteries. Injury posterior to the optic foramen requires neurosurgical evaluation for possible subarachnoid hemorrhage or cerebrospinal fluid leak from the optic nerve sheath. The optic nerve can be avulsed posteriorly at the optic chiasm resulting in loss of vision to the fellow eye. Our second case highlights the risk for ischemic strokes from trauma to the orbital vessels. All patients should be admitted for intravenous antibiotics for meningitis prophylaxis and fingerless mittens or arm restraints until their psychosis can be adequately treated.^{1,4} Antipsychotics are first line medical management; electroconvulsive therapy is a possible adjunctive therapy for refractory cases.⁶ ECT

requires cautionary use as it may increase intraocular pressure, complicating already serious ocular injuries.

Oedipism is an incredibly rare and serious traumatic complication of untreated psychosis resulting in permanent vision loss. Immediate identification of possible sequelae and initiating treatment with a multidisciplinary team can help prevent further impairment to patients.

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