



Report of Avian-Induced Ocular (R) Egret

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Abstract

Purpose: To report a case of a Great Egret attack causing a ruptured globe.

Method: Case report

Results: A 37-year-old male developed vision loss after being attacked by a Great Egret. He had Hand motions visual acuity initially. After four ocular surgical operations including a retinal detachment repair, the patient's vision improved to 20/80 vision.

Conclusion: Avian related ocular injuries to humans are rare. This is the first report of a Great Egret causing a globe rupture. Recognition and coordinated surgical care can result in rehabilitated vision to the injured eye.

Keywords: Great egret; Ruptured globe; Retina; Detachment; Lens; B-scan; Vitrectomy; Lensectomy; Cornea; Keratoplasty

Case Presentation

A 37-year-old male developed vision loss and severe pain in the left eye after being attacked by a Great Egret (Figure 1) at an urban park. The family history was negative for eye diseases, but the patient has a history of mental health disorders, including bipolar disorder and Attention Deficit Hyperactivity Disorder for which he was taking Wellbutrin 100 mg and Paxil 20 mg. The patient was examined that day by a comprehensive ophthalmologist (LH), who diagnosed a ruptured globe. The visual acuity was 20/25⁻¹ in the unaffected right eye and "hand motions" at two feet in the left eye. He had a 10mm, full-thickness, stellate corneal laceration extending from the limbus at the 10 o'clock across the central cornea to 3 o'clock. There was superior iridodialysis and prolapsed of uveal tissue through the corneal wound. He underwent immediate surgical repair for primary closure of the ruptured globe that same day by (LH).

Postoperatively, the patient remained at "hand motions" in the left eye. The pupil was irregular with traumatic superior aniridia (Figure 2). The corneal sutures were intact, and the anterior chamber was formed. The pressure in the left eye was 14 mmHg by tonometry. The fundus view was limited due to vitreous hemorrhage.

The patient was referred to a retina specialist (TY) for further management. A B-scan ultrasound revealed a temporal choroidal detachment and a partially subluxated, cataractous lens. The patient had a dense vitreous hemorrhage. A pars plana vitrectomy was performed five weeks after

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Figure 1: Great Egret (*Ardea alba*) with a long sharp bill.

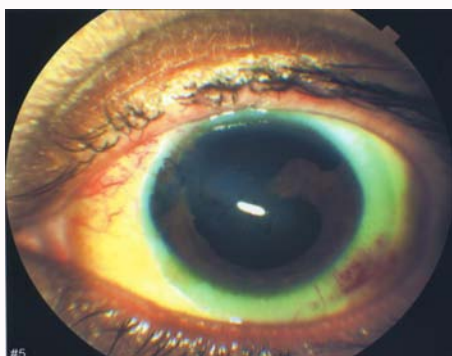


Figure 2: Anterior segment with repair of laceration and aniridia.

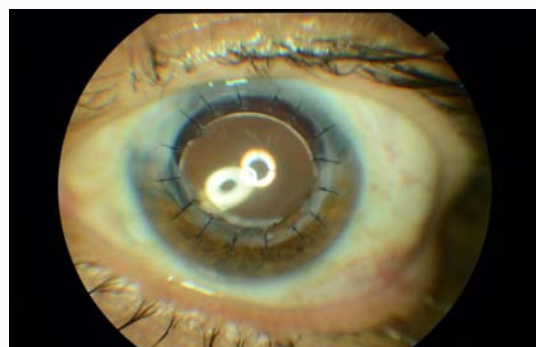


Figure 4: Ocular condition after IOL placement and corneal transplant.

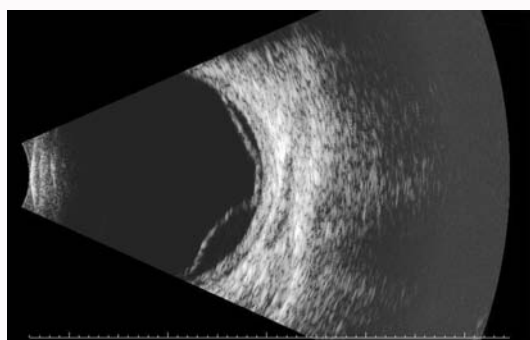


Figure 3: B-scan ultrasound shows clear vitreous with a retinal detachment.



Figure 5: Fundus photograph showing attached retina.

partial reduction of the large choroidal detachment. A lensectomy was also performed using a fragmatome because of the subluxated cataractous lens.

After the vitrectomy, the visual acuity improved from “hand motions” to “counting fingers at two feet”. However, the patient developed a retinal detachment over the next month. A B-scan (Figure 3 and 4) showed a retinal detachment necessitating a vitrectomy retinal detachment repair, membrane peel for proliferative vitreoretinopathy, gas tamponade, and endolaser photocoagulation. The retina remained attached after the second vitrectomy repair; however, he developed progressive corneal scarring.

The patient was subsequently referred to a corneal specialist (LG) for further management. Because of the dense axial cornea scar and aphakia, a penetrating keratoplasty and a secondary IOL placement were performed (LG and DT). The patient had a corneal transplant and Alcon MA60AC +22.5 IOL diopter fixation on the sclera using the glue fixation. The haptics were protected through a scleral tunnel performed open sky with the penetrating keratoplasty.

At his most recent examination, nine months after the corneal transplant and secondary intraocular lens implant surgery, the vision in the left eye improved. The visual acuity measured 20/200 with a pinhole improvement to 20/80. The patient reported doing well with stable vision.

Discussion

The Great Egret, also known as *Ardea alba*, is a large, slender, white heron with a long and sharp yellow bill (Figure 4). Temperate southern California attracts migratory Great Egrets during the winter time [3]. The patient was attacked at a small urban park with a lake in Orange, California. The bird was feeding at the lake when disturbed by the patient, which caused a defense response by the bird. Great

Egrets are known to defend their feeding sites or young with jabbing attacks with their bills [1,2].

Despite being popularized in fictional movies such as “The Birds” [4] avian-related ocular injuries to humans are unusual. An ostrich kicked a human in the face causing severe blunt trauma to the eye [5]. A sparrow had an in-flight collision into a person’s eye causing a central corneal perforating injury and a flat anterior chamber [6]. A mynah bird attack caused a true pecking injury leaving a human with a beak-shaped, full-thickness corneal laceration and total aniridia in the eye [7]. This case is the first report of an egret peck causing a full-thickness laceration of the globe. Ophthalmologists should be aware of this extraordinary mechanism of avian injury related to nesting behavior. Immediate recognition and coordinated surgical care can result in rehabilitated vision to the injured eye.

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