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RESEARCH ARTICLE OPEN ACCESS

A RARE CASE OF EARLY MIGRATION OF OZURDEX PELLET INTO ANTERIOR CHAMBER

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ABSTRACT

A 65 year old male patient who was given dexamethasone intravitreal implant (DEX implant; Ozurdex, Allergan Inc.) 1 week ago presented to us with chief complaint of sudden decrease in vision since 3 days. On slit lamp examination corneal edema was noted and we found the ozurdex implant in anterior chamber.The DEX implant is a non-tethered biodegradable sustained release implant containing 0.7 mg dexamethasone in the Novadur (Allergan) solid polymer drug-delivery system. These implants can occasionally migrate into the anterior chamber, causing vision-threatening complications that involve permanent corneal decompensation. We would like to report this case of early migration of ozurdex pellet into anterior chamber and review the literature pertaining to the anterior chamber migration of implant.

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INTRODUCTION

The Ozurdex® (Ozurdex®; Allergan, Inc, Irvine, CA, USA) dexamethasone drug delivery system (DDS) is a biodegradable intravitreal implant that delivers sustained release of preservative-free dexamethasone to the retina and vitreous.[1] Itis composed of a mix of polylactic acid and polyglycolic acid polymers (PLGA matrix). The implant contains 700 µg of dexamethasone which is released to the vitreous cavity over a 6-month period and can be administered into the eye using an office-based procedure through a 22-gauge injecting applicator through the pars plana. The PLGA polymer matrix, while releasing dexamethasone to its target tissues, dissolves completely *in vivo* into its components, lactic acid and glycolic acid, which are in turn converted into carbon dioxide and water.[2,3]The Ozurdex has been approved for the treatment of macular edema secondary to retinal vein occlusion, noninfectious uveitis affecting the posterior segment and diabetic macular edema (DME).[4,5,6] In this report, we reviewed the literature on anterior chamber migration of ozurdex and described a case of ozurdex pellet which migrated to anterior chamber in a pseudophakic patient .

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CASE REPORT

A 65 year old male patient who was given dexamethasone intravitreal implant (Ozurdex) in right eye 1 week ago for DME presented to us with chief complaint of sudden decrease of vision in right eyer since 3 days. On slit lamp examination of right eye corneal edema was noted , temporal iridodialysis was noted, intraocular lens was stable,while we found the ozurdex pellet in anterior chamber(FIGURE 1),left eye was within normal limits. Intraocular pressure was 26mm of hg in right eye and 16mm of hg in left eye with goldmannapplanation. Fundus examination showed DME in right eye with severe non proliferative diabetic retinopathy and left eye showed moderate non proliferative diabetic retinopathy.Best corrected visual acuity(BCVA) dropped by 1 line to 6/60 compared to pre- injection BCVA 6/36 in right eye. As it was an early migration we planned to reposition it into vitreous cavity, we asked the paient to review for repositioning but unfortunately patient was lost to follow up.

DISCUSSION

The intravitreal administration of sustained-release dexamethasone implant has become increasingly popular over the last few years. The most common complication reported after dexamethasone implantation is an increase in intraocular pressure, which peaks at about 3 months.[7] In addition to the side effects of dexamethasone reported in the literature, such as cataracts and increased intraocular pressure, the implantation procedure itself involves the risk of complications like dislocation to the anterior chamber, corneal

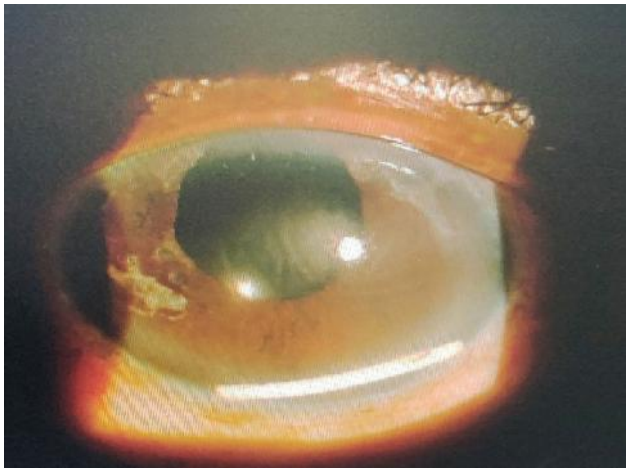

Figure 1. In this eye with temporal iridodialysis, posterior intraocular lens, the ozurdex pellet has migrated into the anterior chamber and corneal edema is present

endothelial damage, secondary corneal edema, and implantation in the lens.[8,9] Anterior chamber migration of a dexamethasone intravitreal implant has been reported in Patients with aphakia,[1] anterior chamber IOL (ACIOL),[10] iris claw lens,[12] scleral-fixated lens[13], and posterior chamber IOL (PCIOL).[13] In majority of the cases, ruptured capsule has been reported as a primary risk factor for the migration of the implant into anterior chamber.[9]Migration of a dexamethasone implant into the anterior chamber is a rare complication that can be managed by directing the implant back into the vitreous cavity or removing it from the anterior chamber through a corneal incision.[10,11] Many techniques like directing the implant into the vitreous cavity after maximum pupillary dilation and corneal manipulation with cotton tip applicator with the patient in reverse Trendelenburg position,[14]surgical repositioning by aspiration with 23g catheter[14], conservative management.[15]

In our case the risk factor is the temporal iridodialysis which must have caused the migration of ozurdex pellet into anterior chamber. Our main aim is to create awareness of the possibility of the migration of ozurdex pellet into anterior chamber. We would like to stress upon the need to carefully select the patients for intravitreal dexamethasone implant. Patients should be carefully followed after intravitreal injection due to the potential risk of corneal decompensation, increase in intraocular pressure, associated with anterior chamber migration of the implant. Whenever the clinician feels there are presence of risk factors for migration of the implant ,patient has to explained before hand.The unique presentation in our case is the early migration of the implant, within 3 days, while previous literature showed migration commonly occurs after 2 weeks.[15] while we planned to reposition the implant unfortunately we lost the patient to follow up.

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