

Case Report

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Globe Perforation Following Chalazion Surgery



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Abstract

Globe perforation is a rare occurrence during chalazion surgery. Sometimes it results in grave results such as vision loss. We report a case of globe perforation with severe vision loss following chalazion removal. A 45 years old lady came to us 15 days after the chalazion surgery who, on examination revealed a pale optic disc, retinal hemorrhage and a perforation site following chalazion surgery in left eye. Care should be taken while giving block and further injection of anaesthetic agent should be withheld if resistance is encountered.

Keywords: Chalazion; Disc pallor; Globe perforation; Peribulbar injections; Retrobulbar injections; Vision loss

Introduction

Globe perforation is a rare complication of retrobulbar or peribulbar injections [1]. The conditions which may observe globe perforation more commonly are high axial length [2], extra-ocular surgeries, deep-set eyes, uncooperative patients, and anesthesia given by non- ophthalmologists. It has also been seen while performing strabismus surgery and chalazion [3,4].

Case Report



Figure 1: Color photograph of LE showing swollen temporal part of the lid following chalazion surgery.

A 45 years old lady, presented at our outpatient department with history of having underwent chalazi on incision and curettage elsewhere 15 days back, following which she complained of loss of vision. Prior to her visit at our centre, she had already been examined by another retinal specialist and was diagnosed as a case of globe perforation with retinal hemorrhage and macular edema. Laser barrage at the site of retinal perforation was performed. After this she visited us for a second opinion. We performed a detailed examination

which included BCVA, IOP measurement, indirect funduscopy and OCT. Best corrected visual acuity was 6/6 in right eye (RE) and counting finger at 1 meter in the left eye (LE). The IOP was recorded as 15mm of Hg in RE and 9mm of Hg in LE. Slit Lamp examination of anterior segment of RE was within normal limits and that of LE showed swollen lid more on temporal side (Figure 1). The fundus examination of the RE was within normal limits however that of LE showed temporal pallor of the disc with retinal hemorrhages temporal to the macula and a laser barraged retinal hole in the superior fundus (Figure 2). The OCT (HRA+OCT Spectralis by Heidelberg, Germany) of LE was found to be within normal limits with the central foveal thickness of 194 micron. Patient was followed every month for 6 months with no significant change in the anatomic status. The optic disc pallor persisted however the visual acuity improved to 6/36 at final follow up. With the presenting clinical picture and a surgical history it appeared to be a case of inadvertent globe perforation in a case of chalazion surgery.



Figure 2: Color photograph of LE fundus showing temporal pallor of the disc, barraged supero-nasal break in retina and retinal hemorrhage near fovea.

Discussion

Perforation of the globe is a well-recognized, though rare, complication of retrobulbar and peribulbar anesthesia, strabismus surgery [3], botulinum toxin injections for strabismus [5]. It has been reported by Shiramizu et al. [4], in chalazion surgery. They reported a similar series of two cases where globe perforation was noted while performing chalazion surgery. Both cases received lid infiltration of the anesthetic agent. None of these patients had disc pallor and they postulated that inadvertent intraocular injection of anesthetic agent caused transient increase in intraocular pressure, which further caused interrupted arterial supply to retina and optic nerve. One patient showed a compressive necrosis in addition which resulted in acute retinal necrosis like picture with retinal detachment. Inadvertent injection of anesthesia inside the globe may cause some degree of retinal toxicity. In a case report by Nagpal M et al. [6], lens expulsion following peribulbar injection was observed in a middle aged man. It is imperative to take care while giving any periocular anaesthetic injection, and when any resistance is felt against the needle it should be withdrawn without injecting any further. If the injection is forcibly continued despite feeling resistance it could lead to a globe rupture often accompanied by lens expulsion [6]. If globe feels hard then paracentesis and an ocular massage can be performed to reduce the pressure. The management of any such mishap includes a detailed

ocular examination including posterior segment and corrective treatment accordingly. In an era where significant amount of cataract surgery is done with topical anaesthesia, it becomes a bigger catastrophe to get a globe perforation in a lid surgery.

Conflict of Interest

Authors have no financial interest.

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