Photo Essay

Phacocele presenting as localized hematoma in a suspected case of traumatic occult scleral rupture

ABSTRACT

Trauma can result in subconjunctival dislocation of lens, which is a rare event. Here, we report a case of phacocele, which masqueraded as localized hematoma in a case of traumatic occult scleral rupture.

Keywords: Blunt trauma, occult scleral rupture, phacocele

INTRODUCTION

Phacocele is defined as the dislocation of crystalline lens into subconjunctival space through the scleral defect following trauma. It is reported that the incidence of phacocele is only 13% among all cases of lens dislocation. Increased scleral rigidity along with hard nucleus predisposes an elderly individual to the development of phacocele following blunt trauma. Other predisposing factors for the development of phacocele are previous ocular surgery, scleritis, and connective-tissue disorders.

CASE REPORT

A 60-year-old female sustained blunt trauma to her right eye when a ripe cashew fruit dropped from a considerable height. Following the injury, she developed defective vision and pain in her right eye.

On examination, the right eye showed a 360° hemorrhagic chemosis with a well-circumscribed hematoma of size 1.5 cm × 2 cm extending from 11'o to 2'o clock position [Figure 1]. Cornea was hazy with total hyphema in the anterior chamber. There was no view of fundus in her right eye due to vitreous hemorrhage. Visual acuity was light perception with accurate projection of light. Intraocular pressure (IOP) was 20 mmHg. Ultrasonography of the right eye showed superomedial dislocation of lens into subconjunctival space, choroidal detachment, and vitreous hemorrhage [Figure 2]. Best-corrected visual acuity (BCVA) in her left eye was 6/24 accounted by the immature senile cataract. Fundus examination was within normal limits. IOP was 18 mmHg in the left eye.

The patient underwent wound exploration, lens extraction, and repair of scleral defect. Under peribulbar anesthesia, peritomy was done from 10'o to 3'o clock position. Superonasally located cataractous lens was extracted [Figure 3]. Scleral defect was noticed from 11'o to 1'o clock position, 3 mm away from limbus, parallel to the superior limbus [Figure 4]. Uveal tissue prolapsing through the defect was abscised followed by suturing of the scleral defect with 8-0 Ethilon [Figure 5]. The patient was left aphakic.

Postoperatively, she could appreciate hand movements only. This was probably due to associated hyphema, choroidal detachment, and vitreous hemorrhage. The patient was

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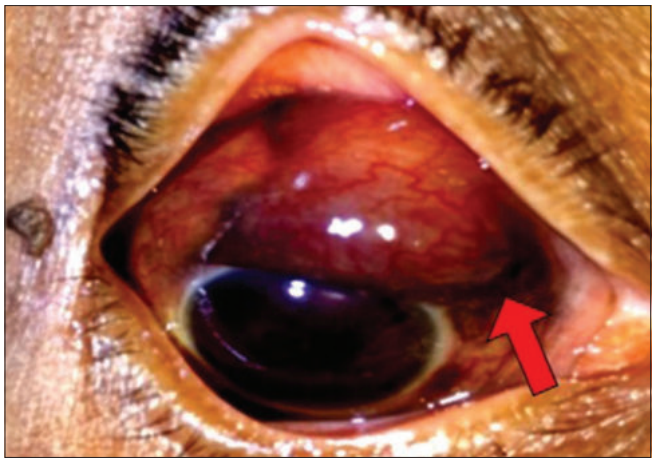

Figure 1: Well-circumscribed hematoma in the superonasal quadrant

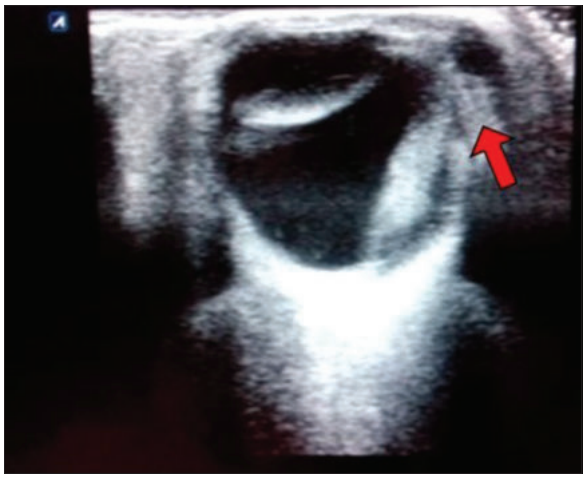

Figure 2: Ultrasonographic picture of the right eye showing lens dislocation

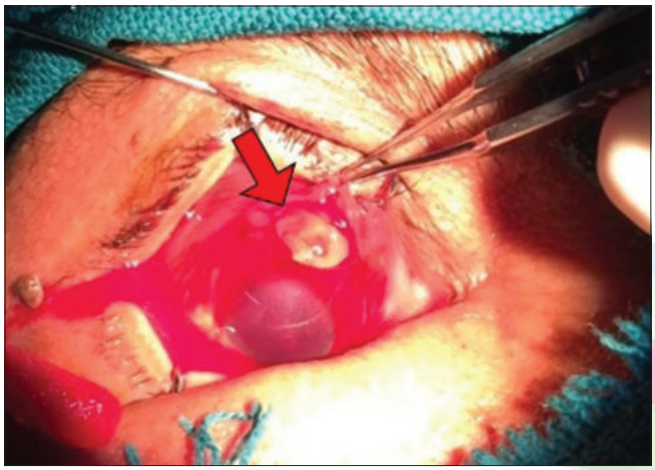

Figure 3: Cataractous lens in the subconjunctival space

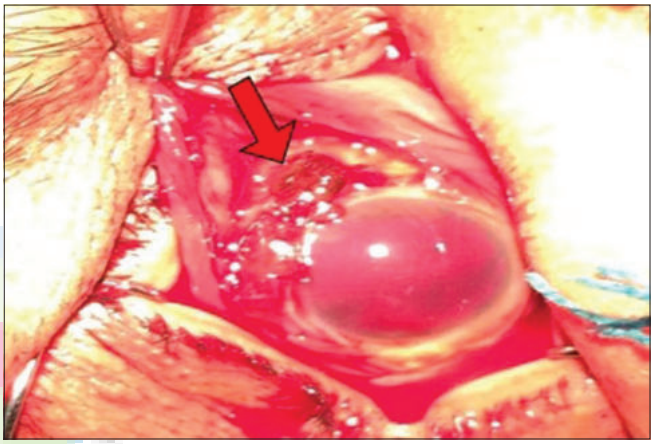

Figure 4: Scleral defect with uveal tissue prolapse

explained about the need for future vitrectomy and placement of scleral fixated IOL.

DISCUSSION

Blunt trauma of sufficient magnitude can result in scleral rupture resulting in dislocation of lens into subconjunctival space. The incidence of phacocele is very less compared to other lens dislocations.

McDonald and Purnell in 1951[1] reported that the incidence of phacocele was only 13% among all cases of lens dislocations they studied. Bhupally *et al.* in 2015[2] noted only one case of phacocele among the 76 cases of ocular trauma. A study by Santos-Bueso *et al*.[3] in 2007 concluded that during blunt trauma, the energy is transmitted from the site of impact superiorly and posteriorly resulting in collision of globe with the orbital wall leading to rupture of sclera. In a study by Fejér in 1928,[4] it was concluded that superonasal quadrant is the most common site for phacocele which was also seen in our patient.

Bhattacharjee *et al*. in 2007[5] reviewed eight cases of traumatic phacocele. Various causes of impact included two cases of wooden piece, fist injury in three cases, coconut leaf broom in one case, and metallic rod in two cases. In our case, injury was sustained by fall of a ripe cashew fruit from a considerable height. All their cases presented with a diffuse subconjunctival hemorrhage and a well-delineated subconjunctival mass. Anterior chamber was deep with hyphema and ultrasonography showed vitreous hemorrhage in all. Similar findings were noted in our case too. All patients in their study underwent wound exploration, lens extraction, anterior vitrectomy, and scleral wound repair. Almost all cases were treated with scleral fixation IOL, during initial repair or during follow-up, except for one patient who was left aphakic. BCVA during postoperative period ranged from 20/20 to 20/100. Visual acuity did not improve in two of the patients due to macular epiretinal membrane. Our patient was left aphakic. She had vitreous hemorrhage and choroidal detachment due to which the postoperative BCVA was only appreciation of hand movements.

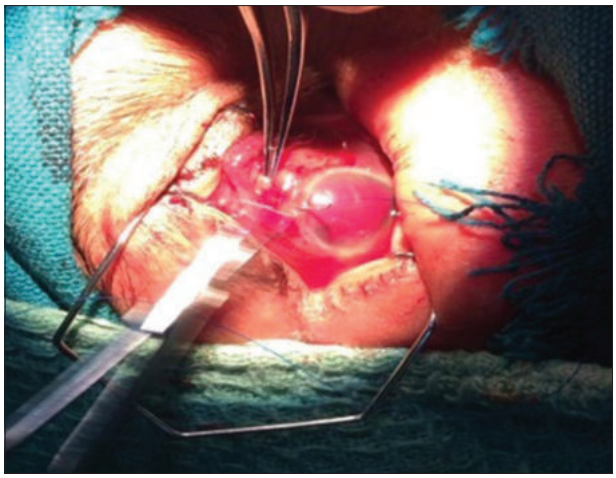

Figure 5: Scleral defect repair

A study by Goel in 2018[6] reported a case of phacocele following administration of peribulbar anesthesia. Increase in IOP following inadvertent administration of local anesthetic intraocularly was hypothesized to be the cause of scleral rupture which led to the development of phacocele.

CONCLUSION

Blunt trauma can result in indirect scleral rupture resulting in dislocation of lens into subconjunctival space. Phacocele should therefore be suspected in a case of occult scleral rupture with localized hematoma. Visual outcome depends on timely diagnosis, proper management, and associated ocular complications.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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