Management of traumatic tractional corectopia

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Corectopia is the displacement of the pupil. It can be isolated congenital anamoly or associated with syndromes like Ectopia lentis et pupillae or Axenfeld–Reiger anamoly.[1] Aquired corectopia is often caused by trauma, surgery, or anterior chamber inflammation.[2] It is caused by a fibrous band exerting traction on the iris and may be either stationary or progressive.[2] Treatment is tailored considering the site of traction and associated comorbidities. We present a case of traumatic tractional corectopia and its management.

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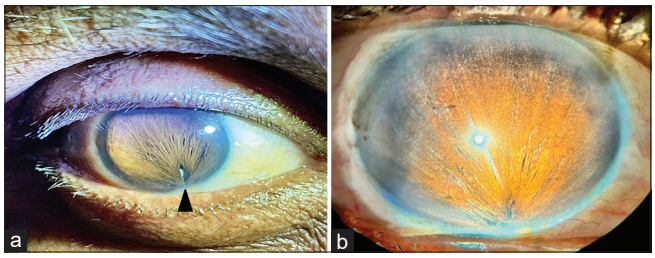

Figure 1: Preoperative images (a). Diffuse light image depicting inferior corectopia with maximal pharmacological dilatation (black arrowhead). (b). Slit-lamp image showing clear cornea, inferior corectopia, and thinned, stretched-out iris (without pharmacological dilatation)

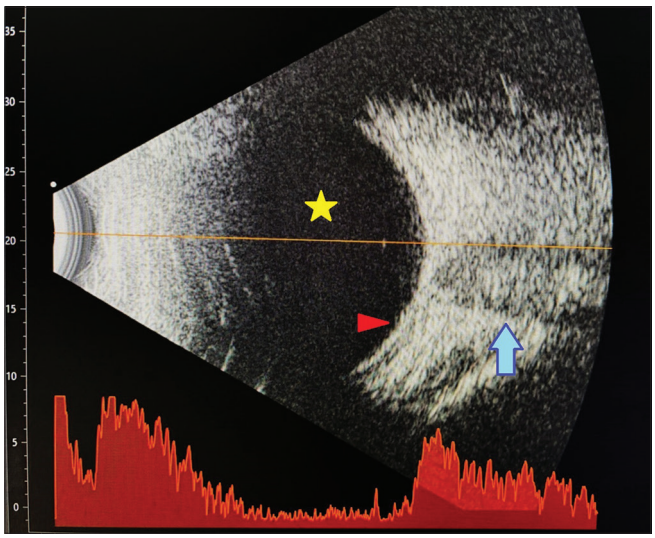

Figure 2: B-scan image showing anechoic vitreous (yellow star), attached retina (red arrowhead), and normal optic nerve shadow (blue arrow)

Case Report

A man in his 40s presented with loss of vision in the right eye for the past 10 years following a workplace trauma with a metal wire. Examination revealed an eccentrically located 0.5 mm pupil with gonioscopic iridocorneal adhesion at 6 o'clock [Fig. 1]. Ultrasound B scan revealed a normal posterior segment [Fig. 2].

Intraoperatively, peripheral synechiolysis and multiple spincterotomies revealed a total cataract with minimal inferior zonular dialysis. Extracapsular cataract extraction with bag stabilization by a capsular tension ring followed by implantation of a rigid intraocular lens was performed [Fig. 3]. The patient achieved a good visual acuity of 20/40 with irregular pupil and no dysphotopsia [Fig. 4].

Discussion

The management of corectopia is tailored depending on the nature and extent of damage. While asymptomatic cases need no treatment, mild cases can be managed with therapeutic mydriasis,[1] compromising accommodation. Severe cases can be managed by spincterotomy,[2] a combination of spincterotomy and pupilloplasty,[1] Nd-YAG laser lysis of fibrous band,[1,3] endothermal pupilloplasty,[4] or radiofrequency cautery.[5] Detailed visualization of iridocorneal adhesions is crucial for successful outcomes.

Although phacoemulsification is the standard approach in modern cataract surgery, intraoperative factors may require conversion to conventional extracapsular cataract extraction (cECCE).[6] In this case, iris instability, atrophic iris tissue, and repeated aspiration of iris tags into the phaco probe increased the risk of further damage, prompting conversion to cECCE by extending the incision. Similar conversions have been reported in eyes with poor iris support, small pupils, or zonular

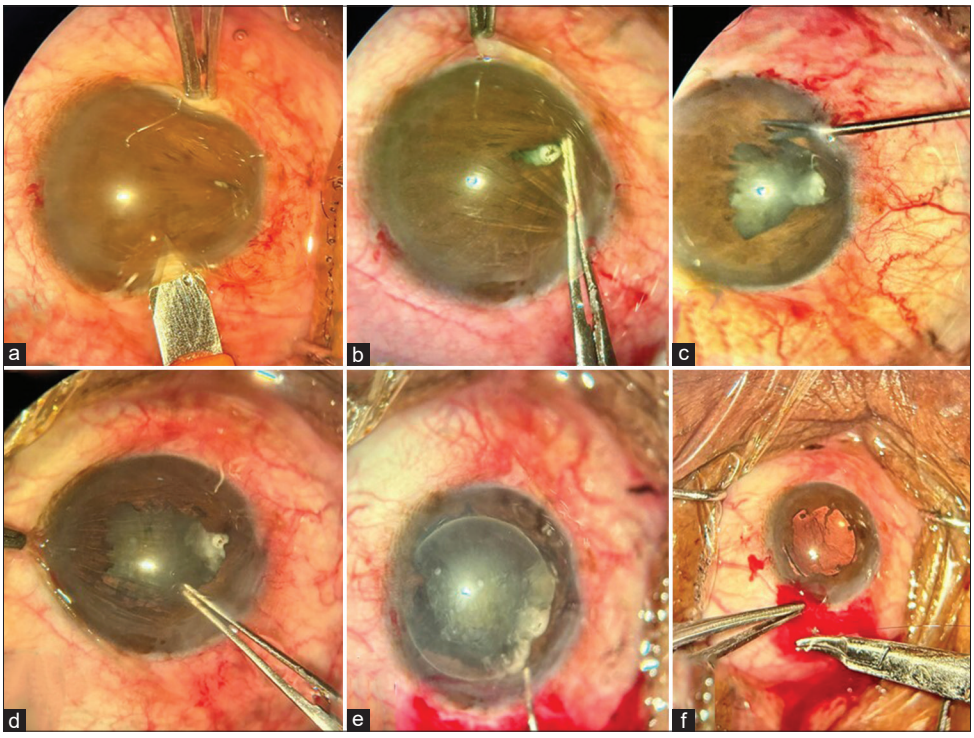

Figure 3: Intraoperative images. (a). 2 paracentesis and a 2.8 mm triplanar entry made. (b). Iridocorneal adhesions released with forceps. (c). Sphincterotomies performed with micro scissors. (d). Capsulorhexis done with Utrata forceps. (e). Nucleus prolapsed into the anterior chamber. (f). Enlarged corneal wound sutured with 10-0 nylon sutures

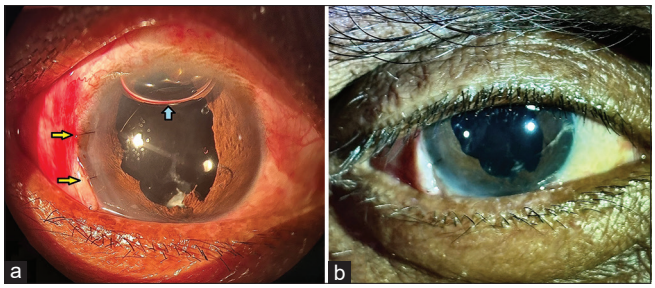

Figure 4: Postoperative images: (a). Slit-lamp image showing clear cornea, a well-formed anterior chamber with air bubble superiorly (blue arrow), and intact sutures (yellow arrow). (b). Diffuse light image

weakness.[7] This case illustrates the complexity of managing traumatic corectopia and cataract, emphasizing the need for adapting surgical techniques to intraoperative challenges to optimize visual outcomes.

Conclusion

A simple surgical approach of synechiolysis and spincterotomy along with cataract surgery can lead to favorable outcomes in case of traumatic tractional corectopia.

Authors' contributions

Keerti Wali: Contributed to the concepts, study design, definition of intellectual content, literature search, clinical and experimental studies, data acquisition, data analysis, manuscript preparation, manuscript editing, and manuscript review. Served as the guarantor of the study. Vaishnavi Patil: Contributed to the concepts, study design, definition of intellectual content, literature search, clinical and experimental studies, data acquisition, data analysis, manuscript preparation, manuscript editing, and manuscript review. Vallabha K: Contributed to the concepts, study design, definition of intellectual content, clinical and experimental studies, data acquisition, data analysis, manuscript editing, and manuscript review. Statistical analysis was not applicable for this study.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the parent has given his consent for 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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