Iridodialysis repair using double-armed McCannell suture

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CASE REPORT

This case reports a 24-year-old male who presented with severe iridodialysis right eye (OD), along with several other ocular injuries including orbital fracture, eyelid laceration, hyphema, traumatic cataract, and lens subluxation following facial trauma. Preoperatively, the patient’s visual acuity OD was count fingers (CF) at 1’ (Figure 1A). The slit lamp exam OD showed iridodialysis temporally and superiorly with fibrotic iris tissue and membrane on the anterior lens capsule (Figure 1B). A McCannell suture iridodialysis repair was performed by using two double-armed sutures and fixating the peripheral iris to the scleral wall, approximately 1 mm posterior to the limbus. This McCannell repair requires less manipulation than other methods of iridodialysis repair. Complex cataract extraction and intraocular lens (IOL) implantation were completed concomitantly. Postoperatively, the patient’s visual acuity remained stable at CF, limited by a macula-involving choroidal rupture. This was discovered with adequate visualization of the posterior pole following the cataract extraction.

DISCUSSION

Our patient had a successful repair of his iridodialysis, as displayed through the preoperative and postoperative images. Though the vision could not be restored in our patient, the cause is attributable to a choroidal rupture and other damages he suffered secondary to the traumatic event. The McCannell suture technique applied in this case is an effective and minimally invasive option [1]. The double-armed McCannell suture method begins with one needle entering the anterior chamber through the corneoscleral limbus inferiorly [1]. It then pierces the iris base and exits the chamber angle and sclera [1]. A second needle is utilized in a similar fashion, entering from the same incision, but rather piercing the iris adjacent to the previous iris base site [1]. The suture is then tied over the sclera and buried [1]. Though it can be modified, typically a 10-0 polypropylene suture is used, which is consistent with our case [1–3]. The McCannell suture technique is not limited to iridodialysis repairs. For example, several cases have been reported showing its use for stabilizing previously subluxated posterior chamber intraocular lenses by attaching one or both haptics to the iris [2]. One potential complication of the double-armed McCannell suture technique is erosion of the suture through the superficial layers of the eye, though this is more likely to occur in children than in adults [3].

CONCLUSION

Our case reports the successful application of the double-armed McCannell suture technique for the repair of iridodialysis secondary to ocular trauma. This method does not require extensive manipulation of the eye, while yielding preferable results, with our case serving as a supporting example.
Keywords: Iridodialysis, Iris, McCannell

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Conflict of Interest
Authors declare no conflict of interest.

Data Availability
All relevant data are within the paper and its Supporting Information files.

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