

A Simple Surgical Technique for Repair of Iridodialysis

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Abstract: A simple surgical technique is described for repair of iridodialysis and a traumatic iridodialysis case is presented. In this technique, a 10-0 polypropylene suture is used for repair. The knot is left in the anterior chamber to avoid suture related complications such as erosion, patient discomfort, and infection. This technique can be a safe and easy way to repair large iridodialysis.

Key Words: Iridodialysis, simple surgical repair

İridodiyaliz Tamiri İçin Basit Bir Cerrahi Teknik

Özet: İridodiyaliz tamiri için basit bir teknik tanımlanmakta ve travmatik bir iridodiyaliz vakası sunulmaktadır. Bu teknikte tamir için, 10-0 polipropilen suture kullanılmıştır. Erozyon, enfeksiyon ve batma gibi suture ile ilişkili komplikasyonlardan kaçınmak için düğüm ön kamarada bırakılmıştır. Bu teknik, geniş iridodiyalizlerin tamirinde güvenli ve basit bir yöntem olarak kullanılabilir.

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Anahtar Sözcükler: İridodiyaliz, basit cerrahi tamir

Introduction

Iridodialysis frequently occurs as a complication of blunt trauma to the globe (1). The defect results from compression of the anterior-posterior aspect of the globe, which stretches the anterior segment structures and leads to the separation of the iris root from the ciliary body. Iridodialysis can also result from surgical manipulation during intraocular procedures. With small iridodialysis the symptoms may be minimal and require no further treatment. With large iridodialysis there may be double pupil effect, monocular diplopia, glare, and photophobia, which require surgical intervention. With this article, we present a simple surgical technique to repair iridodialysis.

Case Report

A 72-year-old man underwent primary corneal suturing after a penetrating injury of the right eye in a traffic accident. Nine months after the initial surgery, he was referred to our clinic for traumatic cataract and iridodialysis repair. Visual acuity was at hand motion level. Intraocular pressure was 16 mmHg, and slit lamp examination revealed a large paracentral oblique corneal scarring, a large (5 clock hours) superotemporal iridodialysis, inferonasally displaced (decentered) oblique pupilla, and traumatic cataract with nasal zonular dialysis (Figure 1). At the beginning of surgery, the technique mentioned below was used to repair the iridodialysis at the superior part at 2 points. The procedure continued with standard cataract extraction using phacoemulsification, capsule tension ring, and a foldable hydrophilic acrylic posterior chamber intraocular lens implantation. At the end of the surgery, the pupil was round and central (Figure 2). One week after the procedure, visual acuity was 20/400 with a round pupilla. At the third-month follow-up visual acuity was 20/200 and the patient had no symptoms of glare, diplopia, or photophobia.

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Figure 1. Preoperative anterior segment. Note the large iridodialysis.

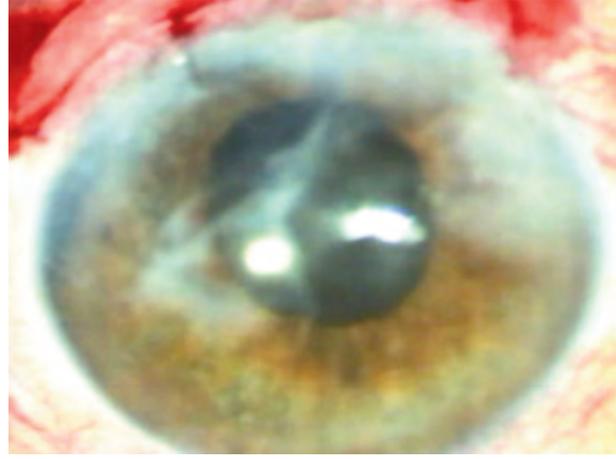


Figure 2. Anterior segment, at the end of the surgery. Note that the pupil has become round and central.

Surgical Technique

Under retrobulbar anesthesia, a fornix based conjunctival peritomy is made to expose sclera in the quadrant of the iridodialysis. A limbal self-sealing incision is made at a planned suturing site (Figure 3a). There may be multiple suturing sites depending on the extent of

iridodialysis. With the help of an ocular viscoelastic device (Healon®, Pharmacia, Sweden), the iris is freed from adhesions. The suture needed for this operation is a 10-0 polypropylene suture (Prolene®, Ethicon, USA). Using forceps, the iris root is taken out through the incision and the needle is first passed through the peripheral iris

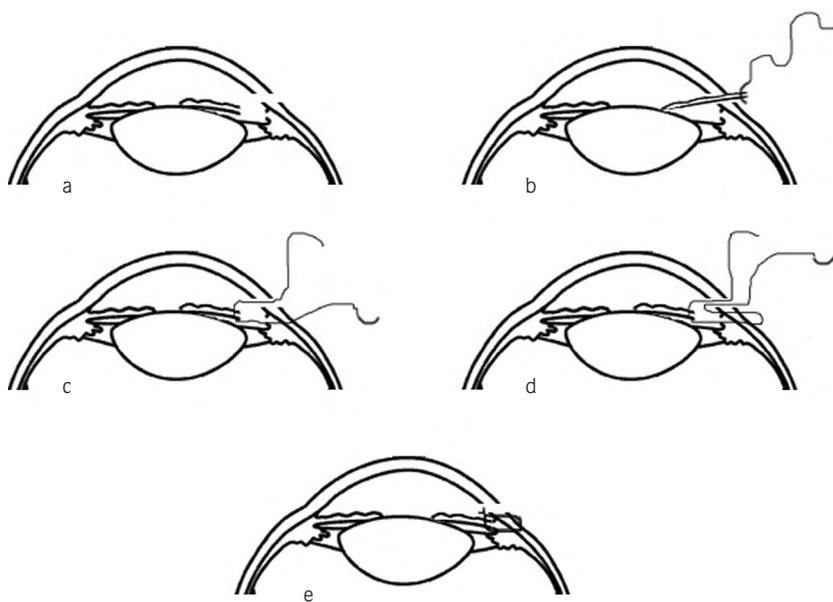


Figure 3. a) A limbal self sealing incision at a planned suturing site. b) Needle passing through the iris root. c) Needle passed through the sclera, inside out. d) Suture course is completed by passing the needle through the sclera to the anterior chamber and taking the needle out through the limbal incision. e) The suture is tied and the knot is left in the anterior chamber.

(Figure 3b). The needle is then passed through sclera, from inside out (Figure 3c). The needle is directed to the anterior chamber through the sclera from outside in and then out through the limbal incision (Figure 3d). The suture is drawn tight so that the iris root is approximated to the base (angle). After the suture is tied, the knot is left in the anterior chamber (Figure 3e).

Discussion

The techniques described to repair iridodialysis can be classified under 2 groups; open chamber techniques and closed chamber techniques. Open chamber techniques access the iridodialysis site through a limbal self-sealing incision or a scleral tunnel incision. (1) Although access to the anterior chamber is attained with a needle in closed chamber techniques, the knot of the suture is left subconjunctivally, buried to the sclera or put under a scleral flap as in open chamber techniques (2 – 6). Similar to subconjunctival knots, scleral burying of the knots may cause erosion and discomfort as well as a predisposition to infection. To avoid these complications, scleral flap techniques similar to the flaps in scleral fixating

intraocular lens implantation is used to bury the knots. However, scleral flap preparation is time consuming and hard to perfect, and have problems, such as erosion and infection (7,8). In the technique described in this article, the knot is left in the anterior chamber to prevent patient discomfort and suture erosion which may minimize the infection rate. It is a simple and easy to understand method, which may be performed by any ophthalmologist and needs no special dexterity. Additionally, a phaco surgery can easily be performed through one of the self-sealing corneal incisions without a new incision. It can be performed with routine surgical instruments and does not necessitate expensive instruments. It also appears to be a safe method because it did not cause any significant complications during the operation or in the postoperative period.

A safe, cheap, and easy method to repair iridodialysis is always sought by anterior segment surgeons. We believe that the technique we describe might be a useful method for repairing iridodialysis. We will have a better understanding of advantages and potential complications of this technique with large case series.

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