

Terrien's Marginal Degeneration: Easily Manageable

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Abstract

Terrien's marginal degeneration is a slowly progressive, non-inflammatory condition, usually bilateral, more commonly affecting males. We are reporting a case of bilateral Terrien's marginal degeneration with spontaneous perforation in right eye. He was managed with primary repair of perforation with polyglactin (coated vicryl) 8/0. It was followed by cataract surgery of dense cataract to improve vision. Patient was 6/12 aided postoperatively.

Keywords: Terrien's marginal degeneration, peripheral corneal thinning
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Introduction

Terrien's marginal degeneration is a rare, slowly progressive peripheral corneal thinning disorder first described in 1900¹. This marginal degeneration is an uncommon disease of the peripheral cornea, occurring at any age, 75% being in males². It may be bilateral or unilateral. Lesions usually begin superonasally or rarely inferiorly with development of fine, white sub epithelial, peripheral opacities that spare the limbus. The opacities coalesce and this is followed by corneal thinning, typically with a sloping central edge and a fairly steep peripheral edge to the resultant furrow^{3,4}. Patients present with blurred vision due to irregular astigmatism⁵. Young patients with the inflammatory form of the disease commonly present with frequent complaints of redness and pain⁶.

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Few cases of bilateral Terrien's marginal degeneration are reported in literature internationally however, locally little published material is available on nontraumatic corneal perforation.

Case report

This is a case of 75 year old male, resident of Karachi. He was a retired personnel. He was referred to us from a private clinic because of corneal perforation. He had history of itching and redness in right eye for last 15 days, for which he was prescribed topical nonsteroidal anti-inflammatory by a local practitioner for 15 days. He was also using artificial tears for the last 3 months. He gave no history of any systemic illness and trauma. Patient was examined on slit lamp. There was conjunctival congestion and corneal thinning from 5 'o clock to 10 'o clock with perforation from 8 to 10 'o clock in right eye. This circumferential gutter was 1-1.5 mm in width with superficial vascularization. There was an intact epithelium away from the site of perforation. Iris was incarcerated in the wound and pupil was drawn towards it as shown in Fig.1. There was dense brown cataract. Visual acuity was counting fingers at 1 foot. Left eye also had conjunctival congestion with thinning and superficial vascularization

360 degrees but with no perforation. Visual acuity of left eye was 6/36 unaided. There was nuclear cataract. On the basis of clinical examination it was diagnosed as a case of Terrien's marginal degeneration. The patient was admitted after written informed consent regarding surgery and its outcome. His baseline investigations (blood CBC, FBS, urine DR) were in normal limits. He was operated next day under retrobulbar anaesthesia. The primary repair was done with 2 interrupted corneoscleral sutures using polygalactin (coated vicryl) 8/0 and anterior chamber was formed. Patient was discharged on the same day. On first post-op day anterior chamber was formed and he was prescribed topical steroid antibiotic drops and ointment for both eyes. Next plan would have been keratoplasty if primary repair had failed. Congestion was relieved within few days (Fig. 2). After 4 weeks patient was operated for cataract of the right eye. Extra capsular cataract surgery was done through scleral incision to avoid areas of corneal thinning. He was discharged on topical steroid antibiotic combination. At 6 weeks his best-corrected visual acuity of right eye was 6/12.

Discussion

Terrien's marginal degeneration is a non-inflammatory condition characterized by slowly progressive, bilateral, marginal corneal ectasia typically beginning superiorly that can progress circumferentially. Marginal thinning begins to occur parallel to the limbus, forming a "gutter-like furrow". This furrow does not ulcerate and an intact epithelium however, lipid deposition occurs as the furrow deepens^{3,4}. In our patient there was no lipid deposition. It was differentiated from Mooren's ulcer due to the classic form of Terrien's marginal degeneration most commonly affecting patients above 40 years of age⁵.

A diagnosis of Terrien's Marginal Degeneration is usually confirmed on corneal topography and a careful slit lamp examination⁵. As it provides valuable information on the corneal curvature and degree and direction of astigmatism⁶.



Fig. 1. Conjunctival congestion, peripheral corneal vascularization, iris prolapse at 9'o clock, pupil drawn toward wound, cataract

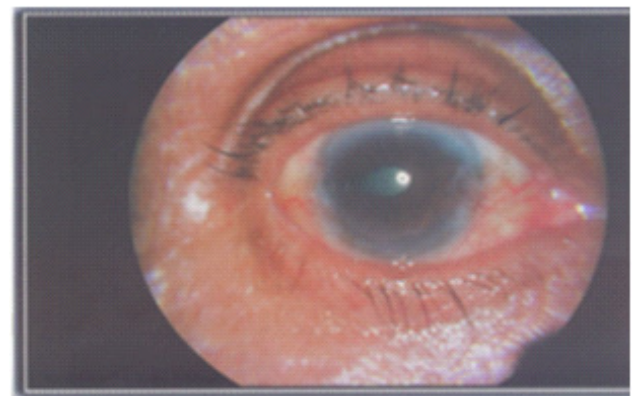


Fig. 2. Congestion is relieved, iris is repositioned, pupil slightly oval

Case of Terrien's marginal degeneration has also been reported with either juvenile idiopathic arthritis or Descemet's membrane detachment⁷. It has also been reported with posterior polymorphous dystrophy⁸ and corneal cyst⁹ formations.

Our patient presented with perforation and only 15% of cases in literature are mentioned with perforation^{2,10}. Ocular trauma or even spontaneously ectatic regions may perforate⁴. Corneal thinning may progress sometimes to corneal break than to hydrops^{2,10}. About 20% of cases may develop complication of pseudopterygia¹¹.

Nirankari et al and Jain K et al have reported a rare presentation, that is more anterior or mid peripheral location of the gutter in absence of any vascularization^{6,12}. However peripheral involvement of cornea is more common due to closer access of inflammatory cells¹³.

Our patient was managed with primary closure and it responded well (Fig.2). Crescentic lamellar keratoplasty, penetrating keratoplasty and finally deep anterior lamellar keratoplasty have been suggested for management of acute hydrops and perforations¹⁴.

Conflict of interest

Authors have no conflict of interests and no grant/ funding from any organization.

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