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Scleral thinning after I-BRITE procedure treated with amniotic membrane graft

A 39-year-old female was referred for punctal plug insertion for dry eye complaints and a nonhealing conjunctival defect in both eyes. She had a history of right eye pterygium and left eye pingecula removal with the I-BRITE (Boxer Wachler Vision Institute, Beverly Hills, Calif.) procedure 2 years previously. The I-BRITE procedure is advertized for the treatment of conjunctiva hyperemia, pterygium, and pinguecula.[1] Postoperatively, she recounted using, in both eyes, topical antibiotics 4 times daily, preservative-free artificial tears, testosterone 10% ointment to the eyelids, mitomycin C (MMC) drops of unknown concentration 4 times daily, and a tapering course of topical steroids.

Examination at the slit-lamp revealed bilateral nasal scleral thinning with corresponding avascular areas and absence of overlying conjunctiva (Fig. 1). She was started on hourly preservative-free artificial tears and ointment at bedtime, testosterone ointment to her lids was stopped, and she was offered amniotic membrane graft with lateral tarsorraphy. No rheumatology work-up was performed, as she had no complaints of joint pains or dry mouth. After much trepidation and 4 months without improvement, she agreed to proceed with amniotic membrane graft, which stabilized her ocular surface for 5 months, after which she presented again with calcific plaques overlying the areas of avascularity. She then refused any further surgical intervention and was lost to follow-up.

Cosmetic eye-whitening procedures for the treatment of chronic conjunctival hyperemia have recently become a topic of interest because of accumulating evidence of severe postoperative complications associated with their practice.[2,3] A large proportion of patients had undergone the surgery termed "regional conjunctivectomy" in South Korea, along with many patients in the United States. Each respective procedure entails resection involving significant amounts of bulbar conjunctiva with or without resection of Tenon's capsule components within the nasal and/or temporal regions of the palpebral fissure, with concomitant intraoperative and postoperative MMC administration topically, subconjunctivally, or both.[2,4] A multitude of postoperative complications have been reported in association with these procedures, including, but not limited to, scleral thinning with or without calcified plaques, chronic dysfunctional tear syndrome, dry eyes, diplopia induced by fibrovascular growth, necrotizing scleritis, and elevated intraocular pressure.[4,5]

The Korean Ministry of Health and Welfare issued an order for discontinuation of the regional conjunctivectomy procedure,[3] and the American Society of Cataract and Refractive Surgery issued a clinical alert in March 2014 recommending use of alternative procedures for treatment of conjunctival hyperemia.[6]

In addition to creating a predisposition for the development of necrotizing scleritis/infectious scleritis,[7,8] MMC has been known to cause scleral ulcerations/calcifications, corneal edema, limbal stem cell deficiency, and iritis, with a highly

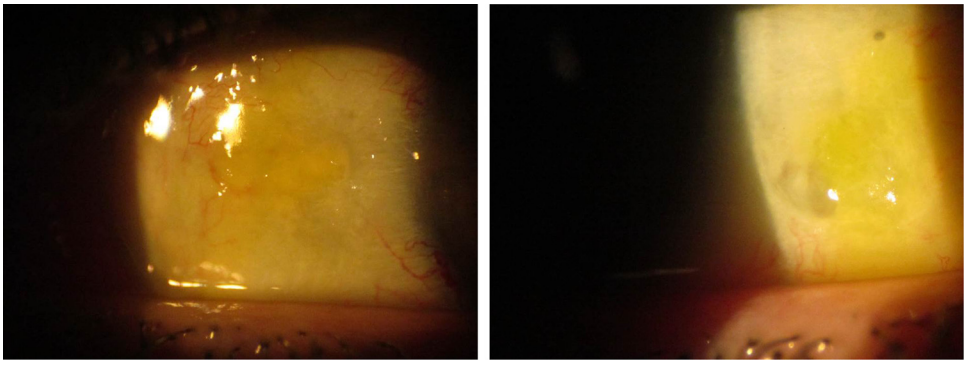

Fig. 1—Slit-lamp photographs of right eye after pterygium and left eye after pinguecula excision with the I-BRITE procedure. Note the nasal avascular areas (both eyes), scleral thinning (right eye), and conjunctival absence (both eyes).

variable postoperative onset of symptoms, ranging from days to years.

Conservative treatment like artificial tears and antibiotic ointments may be instituted at the clinician's discretion for a discrete period of time while monitoring for signs of regression or progression. Implementation of autologous serum tears may also be considered, especially for cases demonstrating recalcitrance of conjunctival epithelial defect resolution. Removal of the calcific plaque also facilitates healing. In more severe cases, additional treatment options available for utilization include placement of amniotic membrane grafts, autologous conjunctival flaps, or simultaneous placement of both.[5] Forms of tissue media available for scleral surface repair include sclera, cornea, pericardium, fascia lata, dermis, and cartilage.[9–14]

This case of scleral thinning illustrates a complication that can arise after the I-BRITE procedure. Comprehensive ophthalmologists should be aware of the potential risks and complications with this surgery, the surgery known as regional conjunctivectomy with MMC, and the alert issued by the ASCRS regarding the procedure.[6,15]

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Necrotizing scleritis after pterygium excision with fibrin glue–fixated conjunctival autograft in Behcet's disease

Surgically induced necrotizing scleritis (SINS) is an uncommon autoimmune reaction occurring at surgical wounds; only 4 cases after pterygium surgery have been reported.[1–4] Pterygium excision with conjunctival autografting has become the surgical technique of choice in the treatment of primary and recurrent pterygia because of the decreased recurrence rates.[5–8]

Scleritis occurring in patients with Behcet's disease has rarely been reported in the literature.[9] We present the first case of SINS after primary pterygium excision with fibrin glue–fixed conjunctival autograft in a patient with Behcet's disease.

A 48-year-old Caucasian female patient was referred to the ophthalmology clinic for treatment of nasal primary pterygium in her left eye. Pterygium excision and conjunctival autograft transplantation fixed with fibrin glue (Tisseel; Baxter, Vienna, Austria) were performed uneventfully. No adjunctive agents were used, and gentle wet field cautery was performed. On postoperative day 1, the slit-lamp examination revealed an avascular, de-epithelialized white pale graft and dehiscence of the graft edges with corneal epithelial defect at the site of the pterygium excision. There was no visible inflammation at the surgery region or on the graft. A wipe sample from the graft surface revealed no organisms in the smears, and the culture revealed no growth. Topical treatment with corticosteroid and antibiotics was initiated. The conjunctival graft was stitched from the 4 edges with 10.0 nylon (Alcon Laboratories, Fort Worth, Tex.) sutures after verification of