Giant Intrascleral Cyst Treated With Trichloroacetic Acid

Intrascleral cysts are a rare complication of strabismus surgery. Treatment of these lesions has previously been described to include excision as well as drainage followed by injection of tetracycline hydrochloride. The use of trichloroacetic acid (TCA) has been described in the treatment of many lesions, including conjunctival and corneoscleral cysts. Here we describe the use of TCA in the treatment of a giant intrascleral cyst.

Report of a Case. A 23-year-old man was referred with a diagnosis of retinal detachment in his left eye. The patient had gradual decreased vision, discomfort, and enlargement of his left eye during the past 12 months. His ocular history included strabismus surgery on both eyes at age 10 years and on the left eye at age 21 years. He was noted to have strabismic amblyopia of the left eye.

On examination, his visual acuity was 20/20 OD and 20/100 OS. External examination of the left eye revealed proptosis and lagophthalmos. Slitlamp examination showed a large bluish scleral bulge superonasally (Figure 1A) and significant surface keratopathy. On fundus examination, areas of dome-shaped retinal and choroidal elevation were noted superiorly and nasally (Figure 1B). An ultrasonographic examination of the left eye demonstrated a large echolucent area 25.4 × 18.9 × 11.9 mm within the sclera, consistent with an intrascleral cyst. The retina and choroid were attached (Figure 2A). A computed tomographic scan was obtained, which showed an intrascleral cyst with no com-

Figure 1. A slitlamp photograph of the left eye demonstrating a bluish-tinged cystic mass superiorly and nasally (A) and a fundus photograph showing elevation of the retina and choroid nasally (B).

Figure 2. A transverse B-scan image at the 12-o’clock position revealing a multilobular echolucent lesion of the left eye (A) and a transverse B-scan image at 9-o’clock position confirming the intrascleral location of the lesion, with the retina and choroid attached (B).
munication between the cyst and the central nervous system.

The patient underwent surgical drainage of the cyst using a 22-gauge Angiocath (Becton, Dickinson, and Co, Franklin Lakes, New Jersey). Approximately 1 mL of material was aspirated and sent for pathological examination. A glass syringe filled with 0.5 mL of 20% TCA was attached to the Angiocath. The remainder of the cyst fluid was aspirated into the glass syringe and mixed with the TCA. This mixture was then reinjected into the cyst approximately 5 times to adequately lavage the cystic cavity. Finally, the empty cystic space was irrigated copiously with BSS Plus (Alcon Laboratories, Inc, Forth Worth, Texas). Indirect ophthalmoscopy confirmed that the posterior aspect of the cyst was completely drained. Microscopical examination of the cyst aspirate showed scattered debris and fragments of keratin.

The patient has been followed up in our clinic for more than 2 years without recurrence of the cyst. His visual acuity improved to 20/30 OS, and his proptosis and surface keratopathy resolved.

**Comment.** Intrasceral cysts are uncommon epithelial inclusion cysts noted to occur following strabismus surgery. They may form as a result of conjunctival epithelial cells being pulled into scleral tunnels made by suture material at the time of muscle reinsertion. This cyst was unusually large—to our knowledge, scleral cysts of this size have not been reported previously.

Sclerodesis of an intrasceral cyst using tetracycline hydrochloride solution (30 mg/mL) has been previously described. Reports of treating the corneal portion of a corneoscleral cyst with TCA as well using TCA for the treatment of conjunctival cysts have also been published. We are unaware of any previous reports of sclerodesis using TCA for the treatment of an intrasceral cyst and could find no reference to it in a computerized search using MEDLINE.

In summary, scleral cysts after strabismus surgery can become quite large. In our patient, it caused proptosis and exposure keratopathy and simulated a retinal detachment. Drainage and sclerodesis with TCA can result in long-term resolution of giant scleral cysts.

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**COMMENTS AND OPINIONS**

**Hypopigmentary Fundus Changes With Cutaneous Vitiligo**

In a nicely illustrated Photo Essay, Ciardella et al described a Hispanic woman with extensive cutaneous vitiligo and choroidal hypopigmentation bilaterally. The authors suggest that the changes in the choroid and skin may have a common etiological root in the neural crest cells. The role of the retinal pigment epithelium (RPE) cells in these patients remains unclear. Recently we described 2 very similar cases with cutaneous vitiligo and choroidal hypopigmentation. They both had normal visual function and additional fluorescein angiogram and electrodiagnostic test results were normal. Based on these findings, we concluded that the RPE was not involved and that the lack of pigment was confined to the choroid in these cases. We suggested that this may occur because both choroidal and skin melanocytes are derived from neural crest cells, differing in this respect from RPE cells that are derived from neuroectoderm.

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