Spontaneous Anterior Capsular Rupture Associated With Anterior Polar Cataract

Lens capsular rupture has been reported to be traumatic or spontaneous. Traumatic capsular ruptures can occur from penetrating, squigual, or blunt trauma. Spontaneous capsular rupture has been described after cataract extraction in the fellow eye or blunt trauma. Spontaneous capsular rupture has been diagnosed as having anterior uveitis (Figures 1, 2, and 3). The remainder of the lens showed 1 to 8.50-diopter nuclear sclerosis. Flare and cells (2−) were present in the anterior chamber, but there was no fibrin or hypopyon. Guttata and pigment were present in the endothelium of both eyes. Uveitis evaluation was noncontributory. Hourly 1% prednisolone acetate and once daily 1% atropine were prescribed. The anterior uveitis resolved in 26 days, and phacoemulsification without intraocular lens implantation was performed 5 weeks after initial examination. During surgery, the anterior capsule and anterior polar cataract were recovered. At the end of surgery, a sub-Tenon injection of 40 mg of triamcinolone acetonide was administered in the inferonasal quadrant.

The capsular specimen was fixed in 10% formaldehyde and stained with hematoxylin-eosin. The presence of a break in the anterior capsule, through which the cortical material was protruding, was confirmed histologically (Figure 4). Aside from a few isolated pigment-containing macrophages, no neutrophils, eosinophils, or other inflammatory cells were present at the site of the capsular break.

One month postoperatively, the eye continued to be quiet and topical steroids were tapered until administration was discontinued. Five months postoperatively, the patient obtained a visual acuity of 20/30 OS with a +8.50-diopter contact lens. At this time, both eyes were quiet during slitlamp examination.

Comment. Lens-induced uveitis has been recognized since 1919 by Straub and later by Verhoeff and Lemoine. The condition is traditionally explained by rupture of the lens capsule either by trauma or spontaneously; the latter is usually related to the presence of hyperma-

References

tured cataracts. To our knowledge, spontaneous capsular rupture causing lens-induced uveitis in the setting of anterior polar cataract has not been described.

Definitive treatment for lens-induced uveitis is cataract extraction. Intracapsular cataract extraction has been the proposed method for treatment of phacogenic uveitis associated with hypermature cataracts to avoid the protein exposure resulting from extracapsular techniques. This technique, however, precludes capsular-based intraocular lens fixation. In patients with uveitis, surgery is considered safer when there has been control of the inflammation for at least 3 months. In our patient with lens-induced uveitis, however, we performed phaco-emulsification promptly once the uveitis was quiet. Although primary posterior chamber intraocular lens insertion may have been reasonable, we decided against it, knowing that some patients can develop chronic intractable intraocular inflammation requiring lens removal to quiet the eye and prevent irreversible damage.

Our diagnosis of lens-induced uveitis was confirmed histopathologically by the presence of a break in the anterior capsule. The absence of inflammatory cells within the substance of the specimen can be explained by the topical use of hourly prednisolone acetate prior to surgery.

We believe our case is the first report of spontaneous capsular rupture in the setting of anterior polar cataract, causing moderate lens-induced uveitis. This patient's uveitis was successfully treated by cataract extraction and local steroids. Visual rehabilitation was achieved with a contact lens.

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