Cataract formation in patients with uveitis remains among the most challenging presentations for surgeons. Consequently, we should be familiar with the surgical strategy and character of these cases in order to manage them effectively.

Young patients with severe inflammation due to uveitis are regularly treated with sub-Tenon’s injection or high doses of intensive systemic steroids. Posterior subcapsular cataract (PSC) is a side effect of steroid treatment, with resultant visual loss. The degree of nucleus hardening in these patients is not as significant as in patients with age-related cataract, but surgery is necessary to remove the cataract and improve visual acuity.

Considering the cause of PSC, performing cataract surgery on these fragile eyes tends to result in rebound and prolongation of severe inflammation. Therefore, cataract surgery must be performed with a low level of aggression and a high level of safety. The softer nucleus of a uveitic eye is difficult to divide with conventional phaco;2,3 however, irrigation and aspiration alone can be inadequate in the presence of a fibrous lens opacity, a harder PSC, or a higher degree of nucleus hardening. Therefore, phaco power is useful during lens removal when irrigation and aspiration alone are insufficient.

I recently developed the phaco dislocation technique and now select it as my first choice for young patients with uveitis. This phaco strategy uses a single incision and avoids division of the lens to minimize surgical time and aggression in the eye and to maximize safety. The steps of the procedure are outlined in Phaco Dislocation Technique on the next page.

### DETAILS OF PHACO DISLOCATION

**Safety.** This is the most important element of phacoemulsification in patients with uveitis. A long and complicated surgical procedure tends to increase the risk and duration of recurrent inflammation after surgery.

Therefore, the surgeon should complete phacoemulsification as quickly as possible using a simple, safe procedure. The phaco dislocation technique has been developed in consideration of the following features.

**Single incision.** Incisions are related to the level of surgical aggression and, especially in patients with uveitis, wound leakage must be avoided. Consequently, the number and size of incisions should be kept to a minimum. The phaco dislocation technique uses only a single, small incision (2.4 to 2.75 mm); there are no sideport incisions.

**Lens dislocation.** Adequate and intentional lens dislocation is key to the success of this technique. The lens is dislocated until one side of the lens equator appears in front of the anterior capsule. This is achieved through continuous water flow in hydrodissection. When lens dislocation is not achieved effectively, push gently on the peripheral lens using leverage with the hydrodissection needle. The intentional dislocation does not stress the zonules as long as the size of the continuous curvilinear capsulorrhexis is adequate.

**No nucleus division.** Incorrect division of the nucleus leads to unsafe phacoemulsification. With the phaco dislocation technique, the lens can be removed without division. First, the lens is shaved from one side of the equator to the center. Next, the lens is turned over so that the other side of the lens equator and the remainder of the lens can be shaved. During these steps, the phaco tip moves horizontally, allowing controlled lens removal. There is little risk of corneal endothelial dam-

---

**TAKE-HOME MESSAGE**

- Performing cataract surgery on eyes with uveitis tends to cause rebound and prolonged severe inflammation.
- The phaco dislocation technique uses one incision and avoids division of the lens.
- This technique is appropriate for patients with soft nuclei.
age and posterior capsular rupture as long as the phaco tip remains at the level of the anterior capsule. Because additional instruments such as a phaco chopper are not needed, the surgeon can pay attention to the movement of the phaco tip, which also increases safety during phacoemulsification.

APPLICATION

Although biologic drugs such as infliximab, immunosuppressive drugs such as cyclosporine, and antiviral drugs such as interferon alpha have been investigated for ophthalmic applications, it is difficult for ophthalmologists to control all ocular inflammation without resorting to steroid treatment.

Many patients with uveitis will develop PSC after steroid use, and surgical intervention to remove the cataract must be delicate to avoid additional or prolonged inflammation. My experience with the phaco dislocation technique extends to young patients with Behçet disease, sarcoidosis, Vogt-Koyanagi-Harada disease, and HLA-B27–associated acute anterior uveitis. The technique can be used not only for these patients with PSC but also for young patients with anterior subcapsular opacity caused by severe anterior inflammation.

Beside patients with uveitis, I have used phaco dislocation in patients with muscular dystrophy who had PSC and patients with cortical cataracts and soft nuclei. Taking into account the features of the technique, I propose that the phaco dislocation surgical strategy is appropriate for patients with soft nuclei who need less aggressive surgery.

Koju Kamoi, MD, PhD, is an Assistant Professor, Department of Ophthalmology and Visual Science, Tokyo Medical and Dental University, Japan, and Research Fellow, Department of Ophthalmology, University of Aberdeen, United Kingdom. Professor Kamoi states that he has no financial interest in the products or companies mentioned. He may be reached at tel: +44 1224555950; e-mail: k.kamoi@abdn.ac.uk.