

Commentary: Management of coexistent cataract and uveitis – Techniques and challenges

Visual outcome and long-term prognosis in patients with coexistent cataract and uveitis largely depend on following principal areas of disease management:

1. Proper classification of type and grade of uveitis, most widely used being standardization of uveitis (SUN classification)
2. Successful remission of uveitis and its associated complications prior to cataract surgery
3. Selection of appropriate surgical technique for cataract removal and suitable intraocular lens (IOL) implantation
4. Selection of appropriate medical and surgical options for postoperative relapses and complications if any.

Undoubtedly, the most important predictor of postoperative visual outcome and surgical success in uveitic cataracts is good control of preoperative inflammation. Most authorities are of the view that uveitis should be in complete remission for a period of 3 months prior to cataract surgery. This may require topical/systemic steroids or steroid-sparing immunomodulatory therapy.

Management of complicated cataract in varied clinical circumstances entails different surgical techniques from extracapsular IOL implantation in intact capsular support to

multiple options in setting of inadequate capsular support, comprising of (1) fixation to the sclera (with sutures or glued); (2) fixation to the iris; or (3) supported by the anterior chamber angle. Each has strengths and weaknesses, advantages and disadvantages with respect to surgical difficulty, surgical time, intraoperative, and postoperative complications.

Undeniably, placement of an IOL in an eye with inadequate capsular support remains a surgical challenge. In addition, type of implanted IOL remains an important consideration. Alio *et al.* prospectively compared polymethylmethacrylate (PMMA), heparin-coated PMMA, acrylic, and silicone lenses in patients with uveitic cataract.^[1] Common consensus swings toward hydrophobic acrylic intraocular lens as the most desired option. However, it becomes a challenging affair in deficient posterior capsule. Placing the IOL in anterior chamber or in ciliary sulcus are two widely used techniques in such settings.

Placing the IOL in ciliary sulcus carries a theoretical advantage owing to anatomical location and definitely serves as a better tool in the armamentarium of operating surgeon. Holland *et al.* have reported excellent outcomes in uveitic cataract with intentional ciliary sulcus placement of lens haptics, stating that sulcus placement reduced the incidence of posterior synechiae and resultant complications.^[2] Sutured trans-scleral sulcus fixated IOLs are associated with visually significant complications owing to subluxation, higher risk of axial tilt, complications related to sutures, exposed haptic, exposed suture, and potential risks of endophthalmitis.^[2] In

contrast, the haptics in glued IOLs, when left underneath the tunnel prevent foreign body sensation, ensuing inflammation and late postoperative endophthalmitis.^[3] However, there have been reports of complications in glued IOL also, notably intraocular hemorrhage, instability of haptics, optic capture, and decentration of IOL requiring repositioning.^[4,5] Most probable reason for decentration being unequal haptic tuck and malpositioned misaligned scleral flaps. Such patients need IOL or haptic repositioning, scleral flap re approximation, and conjunctival suturing. Chronic macular edema and sub-conjunctival haptic visibility have also been reported though the incidence of secondary glaucoma is less.^[5,6]

Authors of aforementioned article^[7] have presented their excellent work in the form of case series on sulcus fixated and glued IOL. In addition, they have correlated the efficacy further with postoperative inflammation. Glued IOLs have stood the test of time when performed immaculately in appropriate indications. I believe ophthalmic fraternity would definitely be benefitted with this fairly simple description of the technique.

Complications profile as reported by authors ranges from IOL deposits in 8 cases (47%), worsening/new cystoid macular oedema 7 cases (41%) in addition to other complications such as hypotony 1 (5.9%), hyphema 1 (5.9%) retinal detachment, secondary glaucoma 2 (11.8%), and epiretinal membrane 4 (23.5%) though in insignificant proportions.

Short follow-up is a major limitation of this study because there is risk of complications in the late postoperative period resulting from disappearance of fibrin glue. There is also the possibility of inadequate scleral-flap healing. Furthermore, fixation into the ciliary sulcus, even with minimal malpositioning may result in chronic irritation to ciliary bodies and/or the iris with secondary complications. Although IOL stability has been reported, late dislocations owing to fibrin biodegradation may occur.

Notably, uveitis flare-up was seen in just 2 (11.8%) cases, indicating that technique of glued IOL is inert with reference to this important consideration. However, the description of other complications in study design as a case series without any comparison group is another limitation of the study.

Thus, additional data from prospective controlled randomized multicentric studies in comparative models, with long follow-ups are needed to best assess visual outcome and complications in varied indications so as to report unbiased conclusions relating to the efficacy of technique in post uveitic cataracts.

Certain points which are worth mentioning and should always be considered while managing a case of uveitic cataract are as follows:

1. Even the most elegantly performed cataract surgery in complicated cataracts is not uncommonly associated with postoperative inflammation and dense posterior capsular opacification requiring multiple YAG capsulotomies or surgical membranectomies necessitating extensive well-documented informed consent for potential complications and guarded visual outcome in all cases of complicated cataracts
2. It is essential not to taper the postoperative anti-inflammatory medications too quickly. Rather oral and topical corticosteroids should be tapered, based on clinical response. Some surgeons routinely inject subconjunctival betamethasone or subtenon/orbital floor triamcinolone at the end of surgery to achieve

good postoperative anti-inflammatory action and prevent resultant complications.^[8] Improved control of uveitis may also be achieved with injection of intravitreal triamcinolone in special circumstances^[9]

3. Caution should be exercised in eyes with a history of scleritis or scleromalacia.

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