Ten-year retrospective review of outcomes following phacoemulsification with intraocular lens implantation in patients with pre-existing uveitis

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ABSTRACT • RÉSUMÉ

Objective: The aim of this study was to evaluate the visual outcome, uveitis control, and complications following cataract surgery for intraocular lens (IOL) implantation in patients with a known diagnosis of uveitis.

Design: The study was a retrospective interventional case series.

Participants: We reviewed 98 patients (137 eyes) with adult uveitis undergoing cataract surgery with foldable acrylic posterior chamber IOL implantation between 2003 and 2013 in 2 uveitis practices.

Methods: Best-corrected visual acuity (BCVA) and uveitis grade (Standardized Uveitis Nomenclature criteria) were measured at 1 month preoperatively, at postoperative week 1, and at postoperative months 1, 6, and 12. The main outcome measures were mean change in postoperative BCVA, uveitis grade, and complications.

Results: Of the eyes studied, 84% had grade 0–0.5 anterior uveitis at postoperative week 1 and maintained uveitis control (77% grade 0; 19% grade 0.5 anterior uveitis) at 1 year postoperatively. None of the patients had active intermediate or posterior uveitis at any time point. Mean BCVA improved from 0.71 ± 0.38 logMAR preoperatively to 0.37 ± 0.36 at 6 months ($p < 0.01$) and to 0.30 ± 0.25 at 12 months ($p = 0.01$) postoperatively. Of the study participants, 30% had preoperative complications related to uveitis, including epiretinal membrane (12%), cystoid macular edema (12%), and glaucoma (5.8%); 46% of patients had small pupils as a result of posterior synechiae. Postoperative vision-limiting complications included posterior capsule opacification (18%), epiretinal membrane (9.0%), and cystoid macular edema (8.8%). Of the eyes studied, 5.8% underwent Nd:YAG capsulotomy.

Conclusions: Cataract surgery with acrylic posterior-chamber IOL implantation is effective at improving visual acuity in patients with uveitis. Uveitis was well controlled in the majority of our study patients for 12 months after cataract surgery. The most frequent vision-limiting postoperative complication was posterior capsule opacification, which was treatable with Nd:YAG capsulotomy.

Objet : Évaluer l'effet sur la vision, la maîtrise de l'uvéite et les complications secondaires à une chirurgie de la cataracte avec implantation d'une lentille intraoculaire (LIO) chez des patients ayant reçu un diagnostic d'uvéite.

Méthodes : On a examiné les cas de 98 patients adultes (137 yeux) atteints d'uvéite ayant subi une chirurgie de la cataracte avec implantation d'une LIO en acrylique pliable en chambre postérieure entre 2003 et 2013 dans deux pratiques d'uvéite. La meilleure acuité visuelle corrigée (MAVC) et le grade de l'uvéite ont été mesurés 1 mois avant l'intervention, puis 1 semaine ainsi que 1, 6 et 12 mois après l'intervention. Les principaux paramètres évalués étaient la variation de la MAVC et du grade d'uvéite ainsi que les complications postopératoires.

Résultats : Dans 84 % des yeux, l'uvéite antérieure était de grade 0–0,5 une semaine après l'intervention, et la maîtrise de l'uvéite se maintenait 1 an plus tard (uvéite antérieure de grade 0 : 77 %; de grade 0,5 : 19 %). La MAVC s'est améliorée, passant de 0,71 ± 0,38 logMAR avant l'intervention à 0,30 ± 0,25 12 mois après l'intervention ($p = 0,01$). Les complications postopératoires limitant la vision ont été l'opacification de la capsule postérieure (18 %), la formation d'une membrane épirétinienne (9,0 %) et l'œdème maculaire cystoïde (8,8 %). On a pratiqué une capsulotomie Nd:YAG dans 5,8 % des yeux.

Conclusions : La chirurgie de la cataracte avec implantation d'une LIO en acrylique en chambre postérieure peut améliorer l'acuité visuelle chez les patients atteints d'uvéite. L'uvéite a été bien maîtrisée chez la majorité des patients pendant 12 mois après la chirurgie. La principale complication postopératoire limitant la vision a été l'opacification de la capsule postérieure.

Cataract is a frequent complication of uveitis because of the natural history of uveitis and the corticosteroids used to treat uveitis. Many studies on the surgical outcomes for patients with uveitis undergoing cataract surgery have been published; however, there has been no consensus on best practices possibly as a result of differences in reporting preoperative characteristics, such as grade of uveitis, surgical technique, or perioperative anti-inflammatory prophylaxis. In a recent systematic literature review and meta-analysis, Mehta et al. identified 89 eligible studies that reported cataract surgery outcomes in patients with a mixture of uveitis types, but 24 of those studies did not state the level of preoperative uveitis activity.[1] In addition, only 13 studied the outcomes of phacoemulsification with intraocular lens (IOL) implantation, and none of the studies involved Canadian patients.[1] The primary purpose of this study was to evaluate the surgical outcomes for patients who had a mixture of uveitis etiologies and underwent phacoemulsification with IOL implantation in 2 large tertiary practices in Canada.

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METHODS

A retrospective interventional case series was conducted. The study obtained approval from the institutional review ethics board at St. Michael's Hospital in Toronto, Canada. Patients who had obtained a diagnosis of uveitis in 2 academic uveitis practices and had phacoemulsification with IOL implantation between July 2003 and August 2013 and a minimum follow-up of 6 months were included. Patients younger than 18 years of age or patients who underwent cataract extraction by methods other than phacoemulsification were excluded. Similar protocols for perioperative management of these patients were used by both surgeons. It is possible that minor differences existed in the surgical techniques of the 2 surgeons; however, both surgeons were performing cataract extraction with up-to-date phacoemulsification techniques. All of the patients who had well-controlled uveitis for the 3-month period prior to surgery had anterior chamber cells less than ½+ for 3 months prior to surgery. Immunosuppressive medications were maintained at a stable dose for 3 to 4 months prior to cataract surgery, and topical steroid drops were adjusted to ensure control of uveitis for 3 to 4 months prior to surgery (but the frequency of topical steroids was kept at a maximum dosing of 4 times daily). All patients increased their topical prednisolone 1% drops 1 to 2 weeks preoperatively and continued postoperatively with gradual tapering over 4 to 6 weeks. A fourth-generation fluoroquinolone (moxifloxacin or gatifloxacin) was started 3 days preoperatively and continued postoperatively. A topical nonsteroidal anti-inflammatory drug (diclofenac or nepafenac or ketorolac) was started 3 days postoperatively. Patients were given 250 to 500 mg intravenous (IV) methylprednisolone intraoperatively or 40 to 60 mg oral prednisone for 3 days preoperatively and tapered over 7 to 10 days postoperatively. Immunosuppressive medications used to control the uveitis preoperatively were continued postoperatively. Patients were seen for follow-up within 1 week and every 1 to 2 weeks postoperatively until 1 month postoperatively and then subsequently at 1- to 3-month intervals.

Data were retrieved from the electronic medical records of the 2 practices. Demographic information, including age at surgery, sex, and time since diagnosis of uveitis, was recorded. Clinical information, including classification of uveitis (Standardization of Uveitis Nomenclature [SUN] criteria),[2] etiology of uveitis (International Uveitis Study Group classification of uveitis), presence of a uveitis-associated systemic disease, details of uveitis treatment, pre-existing complications of uveitis (epiretinal membrane [ERM], cystoid macular edema [CME], glaucoma) were recorded.

At 1 month preoperatively and at 1 week, 1 month, 6 months, and 12 months postoperatively, the following information was recorded: BCVA, grade of anterior uveitis (SUN criteria[2] IOL position [posterior chamber, sulcus, anterior chamber]; iris features (presence of posterior synechiae, transillumination, corectopia, small pupil); posterior capsule opacification (PCO); optic disc abnormalities; macular abnormalities (ERM, CME, pigment change); vitritis (NEI system for grading vitreous haze[3]); and presence of posterior uveitis (SUN criteria).[2]

CME was diagnosed on clinical examination and confirmed by optical coherence tomography or fluorescein angiography if clinical suspicion existed. Perioperative or intraoperative steroids, type of IOL implanted, and whether the patients underwent Nd:YAG capsulotomy were also recorded.

Postoperative uveitis was defined as any new occurrence of inflammation within 6 months postoperatively after initial resolution of routine postoperative inflammation. PCO was considered clinically significant if it caused symptoms of glare or blurred vision, impaired posterior segment view or required Nd:YAG capsulotomy. Postoperative CME was defined as the development of angiographically or clinically identifiable CME or retinal thickening, particularly if it was correlated with visual acuity or with symptoms of blurred vision. The term "recurrent" was used to describe episodes of macular edema or uveitis that occurred after a 3-month period of inactivity (i.e., no uveitis or no CME for 3 months)

Statistical analysis was performed by using SPSS version 22.0 for Windows software (SPSS Inc, Chicago, Ill.). For statistical analysis, Snellen's acuity was converted into logMAR. The paired *t* test was used to compare

Table 1—Patient characteristics

Characteristic	All Patients (N = 98)	All Eyes (N = 137)
Age at Surgery (years)		
Mean (SD)	53.5 (13.0)	54.3 (12.7)
Range	18–73	18–73
Sex, M:F	42 (42.9%): 56 (57.1%)	56 (40.9%): 81 (59.1%)
Uveitis Diagnosis, n (%)		
Anterior	51 (53.0)	64 (47.8)
Intermediate	9 (9.4)	14 (10.4)
Posterior	6 (6.3)	10 (7.5)
Panuveitis	30 (31.3)	46 (34.3)
Uveitis-Associated Systemic Disease, n (%)		
Ankylosing spondylitis		6 (4.4)
Behçet disease		4 (2.9)
Birdshot		6 (4.4)
Fuch uveitis		7 (5.1)
Herpetic		3 (2.2)
HLA B27		12 (8.8)
Idiopathic		56 (40.9)
JIA		4 (2.9)
Sarcoidosis		23 (16.8)
TB		2 (1.5)
VKH syndrome		5 (3.6)
Other		9 (6.6)
IOL Types, n (%)		
Acrylic	98 (100)	137 (100)
Follow-up (months)		
Mean (SD)		28.3 (25.0)
Range		1-119
Number of patients on IMT*	22	44

IOL, intraocular lens; JIA, juvenile idiopathic arthritis; TB, tuberculosis; VKH, Vogt-Koyanagi-Harada; SD, standard deviation; IMT, immunomodulatory therapy.

*IMT includes infliximab, methotrexate, etanercept, mycophenolate mofetil, adalimumab, and azathioprine.

preoperative and postoperative BCVA. Fisher's exact test was used to compare the rates of PCO, CME, and ≥20/40 BCVA postoperatively (at 6 months and 12 months) between patients who received intraoperative IV methylprednisolone and patients treated with 1-week course of preoperative and postoperative oral prednisone. χ^2 and log rank tests were used to identify risk factors associated with worse outcomes. Results were significant if $p < 0.05$.

Results

The clinical and demographic features of the patients are listed in Table 1. In total, 137 eyes of 98 patients were included; 56 (57.1%) patients were female. The mean (range) age of the patients at the time of surgery was 53 (18–73 years) years and the mean (range) follow-up duration was 28.3 months (1–119 months). A total of 64 eyes (47.8%) had anterior uveitis; 14 (10.4%) had intermediate uveitis; 10 eyes (7.5%) had posterior uveitis; and 46 eyes (34.3%) had panuveitis. Uveitis-associated systemic disease was identified in 81 eyes (59%) (see Table 1). Of the eyes studied, 30% had complications related to uveitis prior to surgery, including ERM (12%) and glaucoma (5.8%); 46% of eyes had small pupils because of posterior synechiae. Uveitis was controlled with systemic immunosuppressants in 22 of 98 patients (22.4%) or 44 of 137 eyes (32.0%).

All patients had implantation of an acrylic IOL. The most common type of IOL implanted was the Alcon SN60WF IQ (Alcon Laboratories Inc, Fort Worth, TX) (77%), 7% of eyes received Tecnis ZCBOO (Abbott Medical Optics, Santa Ana, CA), and 4% received the Alcon AcrySof SA60AT (Alcon Laboratories Inc, Fort Worth, TX). No patients experienced intraoperative surgical complications.

Figure 1 shows BCVA preoperatively and at 1 week, 1 month, 6 months, and 12 months postoperatively.

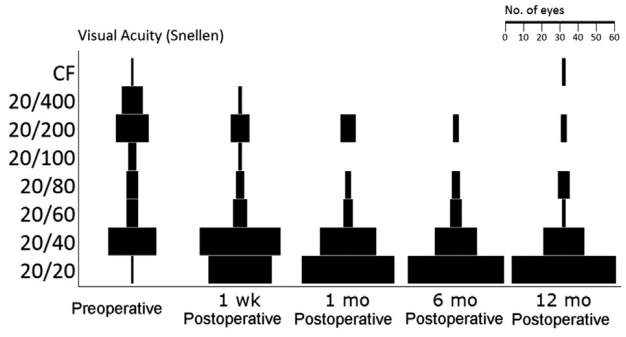

Fig. 1—Distribution of best-corrected Snellen visual acuities at 5 stages: immediately before surgery (preoperative, mode = 20/40; 25 eyes); 1 week postoperative (mode = 20/40; 42 eyes); 1 month postoperative (mode = 20/20; 48 eyes); 6 months postoperative (mode = 20/20; 50 eyes) and 12 months postoperative (mode = 20/20; 54 eyes). Scale in upper right corner for number of eyes; CF = count fingers. *Thirteen eyes did not have 1-year postoperative visual acuity.

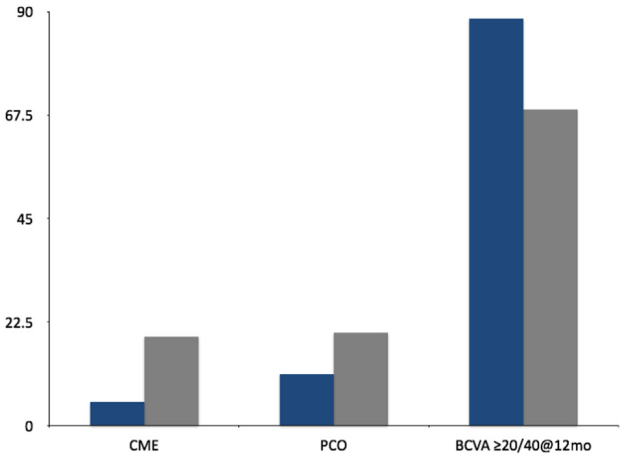

Fig. 2—Differences (%) in postoperative outcomes between patients who received intravenous methylprednisolone intraoperatively versus preoperative and postoperative oral prednisone.

Mean BCVA improved from 0.71 ± 0.38 logMAR preoperatively to 0.27 ± 0.36 at 1 month ($p < 0.01$) and to 0.26 ± 0.25 at 12 months ($p = 0.01$) postoperatively. At 12 months 80.6% of eyes had 20/40 or better BCVA.

Figure 2 shows the postoperative CME and PCO rates at 12 months and rates of 20/40 or better BCVA postoperatively at 12 months in patients treated with a 1-week course of preoperative and postoperative oral prednisone compared with those treated with intraoperative IV methylprednisolone. There was statistically significant increase in the risk of developing CME in patients treated with oral prednisone compared with intraoperative IV methylprednisolone (19% vs 4.4%; $p = 0.016$) and statistically significant lower rates of achieving 20/40 or better BCVA at 12 months in patients treated with oral prednisone compared to intraoperative IV methylprednisolone (68.8% vs 88.5%; $p = 0.024$, respectively). There was no statistically significant difference between the preoperative CME rates of those who received intraoperative IV methylprednisolone (20%) and of those who were treated with oral prednisone (19%) ($p = 0.82$). There was no statistical significance in the PCO rates at 12 months between patients who received oral prednisone and those who received intraoperative IV methylprednisolone (20.1% vs 11.2%; $p = 0.31$).

For all of the patients studied in this cohort, uveitis activity was 0.5+ grade or less for at least 1 month preoperatively with a mean length of uveitis inactivity of 5.5 months and median length of 4 months. Preoperatively, 104 eyes (76%) had no uveitis activity and 23 eyes (16.7%) were grade 0.5+. No patients had uveitis grade >0.5 + prior to surgery.

Postoperative complications

Postoperatively, 0.5+ grade anterior uveitis was found in 59 eyes (43.1%) at 1 week, in 42 eyes (30.7%) at

Table 2—Relationship between preoperative cystoid macular edema (CME) and postoperative CME (p value for Fisher's exact test comparing preoperative and postoperative CME rates)

Treatment Group	Preoperative CME (%)	Postoperative CME (%)	Preoperative CME and Postoperative CME (%)	*p* value
Preoperative oral prednisone (n = 37)	7 (19)	7 (19)	6/7 (86)	<0.001
Intraoperative intravenous methylprednisolone (n = 91)	18 (20)	5 (4.4)	3/18 (16.7)	0.051
Intraoperative intravenous methylprednisolone with postoperative oral prednisone (n = 8)	5 (63)	1 (13)	0/5 (0)	0.375

1 month, in 28 eyes (20.4%) at 6 months, and in 14 eyes (10.2%) at 1 year. Five eyes (3.6%) had persistent postoperative 1+ anterior uveitis at 1 months and 6 months and resolved by the 1-year follow up. No patients had >1+ anterior uveitis at any time in the first year after cataract surgery. No patients had active intermediate or posterior uveitis at any time preoperatively or postoperatively. No patients required additional immunosuppressive therapy to control inflammation. Eight patients who had received IV methylprednisolone intraoperatively required additional oral prednisone in the first 2 weeks postoperatively if the postoperative uveitis was greater than >1+ in the first week.

Table 2 shows that patients with a history of preoperative CME are more likely to develop postoperative CME compared with those who did not have preoperative CME, whether they received intraoperative IV methylprednisolone or preoperative oral prednisone ($p = 0.02$ and $p < 0.001$, respectively). There was no relationship between preoperative and postoperative CME in those who received oral prednisone following intraoperative IV methylprednisolone ($p = 0.17$).

PCO was the most common complication, occurring in 10 eyes (7.3%). Four (2.9%) of these eyes required Nd:YAG capsulotomy. The time to development of PCO ranged between 1 and 53 months (median 12 months).

CME developed in 13 eyes. The median time to presentation was 25 days. Nine of these eyes had previously documented CME in the course of their uveitis but their CME had resolved preoperatively. In 2 eyes, postoperative CME was treated with topical steroids and topical nonsteroidal anti-inflammatory drugs, oral steroids, and posterior subtenon corticosteroids.

Postoperative PCO occurred in 19% patients treated with immunosuppression (immunomodulatory therapy [IMT]) and 18% patients not treated with IMT. Postoperative CME occurred in 13% patients treated with IMT and 6.7% patients not treated with IMT, and visual acuity ≥20/40 occurred in 78% of patients in both treatment groups (Table 3). Table 3 shows the numbers of patients who were treated with immunosuppressives and developed postoperative PCO and postoperative CME. Table 4 shows the number of patients in the preoperative prednisone, intraoperative IV methylprednisolone group; the intraoperative IV methylprednisolone + postoperative oral prednisone group were being treated with immunosuppression and had intermediate, posterior, or panuveitis.

Table 3—Postoperative outcomes comparing patients on immunosuppressants and those not on immunosuppressants

Immunosuppressants (IMT)	Postoperative PCO (%)	Postoperative CME (%)	Postoperative Visual Acuity Better than 20/40 (%)*
On IMT	8 (19)	6 (13)	36 (78)
No IMT	16 (18)	6 (6.7)	62 (78)

IMT, immunomodulatory therapy; PCO, posterior capsule opacification; CME, cystoid macular edema.

*13 eyes did not have one-year postoperative visual acuity

Two (1.5%) eyes had elevated intraocular pressure, which resolved with topical and oral treatments and did not require further surgical treatment. New ERM developed in 3 eyes (2.2%) after cataract surgery.

The only statistically significant predictors for better visual acuity outcome was the absence of preoperative uveitis-associated complications, such as ERM, CME, or glaucoma ($p = 0.011$). The etiology of uveitis, patient age and sex, length of uveitis inactivity, and presence of small pupils were not statistically significant predictors.

Discussion

Our study demonstrates significant improvement in visual acuity and minimal disease recurrence in patients with uveitis undergoing phacoemulsification with acrylic IOL implantation. Our outcomes are more favourable in comparison with those reported in the current literature. In the meta-analysis published by Mehta et al. in 2014, the overall proportion of patients with 20/40 vision or better after cataract extraction with acrylic IOLs was 69% at 12 months in 7 studies published between 2001 and 2006. This percentage compares with 80.6% of participants in our study with vision of 20/40 or better at 12 months postoperatively. Of note, all of the patients in our study were in remission for longer than 2 months preoperatively with a mean of 5.5 months with 0.5+ anterior chamber cells or less. This practice is a reflection of evidence-based approach to management, and the favourable postoperative visual acuity outcomes in our study are in keeping with those reported in the current literature, demonstrating that patients with active inflammation at the time of surgery have poorer visual outcomes.[1,4–6]

Our cohort also had a lower rate of recurrence of postoperative uveitis and other postoperative complications compared with those in similar studies in the literature. In a retrospective study, with a mean follow-up duration of 20 months, Estafanous et al. reported that

Table 4—Characteristics of patients treated with preoperative prednisone versus intraoperative intravenous methylprednisolone and postoperative oral prednisone

Treatment Group	Treated with Immunosuppressants (%)	Diagnosed with Intermediate Uveitis, Posterior Uveitis, Panuveitis
Preoperative oral prednisone (n = 37)	4 (11)	20 (54)
Intraoperative intravenous methylprednisolone (n = 91)	37 (41)	45 (50)
Intraoperative intravenous methylprednisolone with postoperative oral prednisone (n = 8)	6 (75)	5 (63)

in the total of 32 study patients, the recurrence of uveitis was observed in 41%, PCO in 62%, ERM in 15%, and macular edema in 15%.[4] In another study, with a mean follow-up duration of 24.1 months, Rahman et al. reported a similar prevalence of postoperative uveitis (36%) and macular edema (2%).[5] Krishna et al. reported that PCO, macular edema, and uveitis occurred in 58%, 56%, and 53%, respectively, over an average follow-up period of 81.4 months.[7] Okhravi et al. reported 32%, 20%, and 34% of PCO, macular edema, and postoperative uveitis, respectively, over a mean follow-up duration of 10.2 months.[6] Damage to the blood–aqueous barrier during cataract surgery[8] and early postoperative inflammation are thought to be associated with development of macular edema.[9,10] The lower rate of PCO of 7.3% in our study likely resulted from the use of modern phacoemulsification techniques as well as the use of acrylic IOL. The use of more biocompatible IOLs and the improved removal of the cortical lens matter are both known to decrease PCO rates.[11] In our cohort, only 14.5% of eyes developed postoperative CME, which is lower than the rates reported in most studies in the literature.[4–7]

Although our study was not designed to determine whether a history of CME at any time prior to surgery increases the risk of postoperative CME, our data show that the risk of developing postoperative CME was higher in patients with a history of preoperative CME irrespective of being treated with preoperative steroids or intraoperative IV methylprednisolone. We found a higher rate of postoperative CME in the preoperative oral prednisone group (19%) than in the intraoperative methylprednisolone group (4.4%). The rates of preoperative CME were not statistically different between both groups. Although our data are retrospective, our analysis suggests a trend toward lower risk of postoperative CME with Intraoperative IV methylprednisolone.

As shown in Table 4, there were more patients in the intraoperative IV methylprednisolone and in the IV methylprednisolone plus postoperative oral prednisone groups, who were also treated with immunosuppressants (41% and 75%, respectively) compared with 11% in the preoperative prednisone group; therefore there is no suggestion of more severe uveitis in the preoperative prednisone group, based on requirement for IMT. The numbers of patients with intermediate uveitis, posterior uveitis, or panuveitis was very similar in all groups (54%, 50%, and 63%, respectively), which suggests that the severity of uveitis was similar in all groups.

Uveitis treatment with immunosuppression did not influence postoperative PCO and visual acuity outcomes in our case series. CME occurred more frequently in patients who were treated with immunosuppression (13% CME in patients treated with IMT and 6.7% CME in patients not treated with IMT). Patient treated with immunosuppression are more likely to have severe or chronic uveitis and are therefore more at risk for developing CME.

The importance of uveitis control for 3 to 4 months preoperatively has been reported previously.[1] All of our patients had controlled uveitis for a mean of 5.5 months (grade ≤ 0.5 anterior uveitis and no active intermediate or posterior uveitis) prior to surgery. Because the uveitis had been well controlled in all of the patients undergoing cataract surgery, we did not find a correlation between length of preoperative inactivity and visual acuity outcomes. Close follow-up of our patients in the postoperative period, as well as monitoring of uveitis activity and increasing topical, periocular, or oral medications, as necessary, most likely also contributed to the favourable outcomes for our patients.

In our cohort, 7.3% of eyes developed PCO. PCO has been reported to occur more frequently in patients with uveitis.[5,7] Current studies have shown that PCO rates after uncomplicated non-uveitic cataract is as high as 37% in adults younger than 65 years of age and 20% in adults older than 65 years of age, over a 10-year follow-up period.[12] Therefore, despite having pre-existing uveitis, the PCO rates in our cohort were similar to the PCO rates in non-uveitic cataract surgery.

All of our study patients underwent phacoemulsification with acrylic IOL implantation. Other studies with implantation of heparin-surface-modified polymethylmethacrylate (PMMA) IOL reported comparable postoperative outcomes. Both acrylic and heparin-surface-modified PMMA) achieved better visual acuity outcomes compared with non–heparin-surface-modified PMMA IOL, where only 62% of patients achieve better than 20/40 vision. Overall, silicone IOLs had the worst outcomes, with only 30% of patients achieving 20/40 vision or better.[1]

We were not able to find a correlation between the etiology of uveitis and patient outcomes in our cohort. Other studies have suggested that the etiology of uveitis affects visual outcomes following cataract surgery. In the systematic review by Mehta et al., 15 studies on patients with Fuch heterochromic uveitis showed that 92% of eyes with recorded preoperative activity achieved 20/40 vision or better, but in the 7 studies with unstated preoperative

uveitis control, only 78% of patients achieved 20/40 vision or better. In contrast, in the 6 studies on patients with Behçet disease, 36% of eyes achieved 20/40 vision or better.[1] The difficulty in finding a correlation could have resulted from the relatively low numbers of patients in our study cohort for certain etiologies.

This study was limited by its retrospective design. It was based on the practice of 2 tertiary-care uveitis specialist centres, where patients have more advanced disease and therefore may have postoperative outcomes with a more guarded prognosis compared with patients seen in a general ophthalmology practice.

The strengths of this study include its large study cohort and lengthy follow-up time. To our knowledge, this is the first such study reporting data on Canadian patients. In addition, this is the first-ever study to compare perioperative oral steroids to IV steroids used in the management of uveitis.

Conclusions

Our study highlights the overall positive outcome of phacoemulsification with IOL implantation in patients with pre-existing uveitis by using modern phacoemulsification techniques. The outcome data presented here can be useful in counselling patients with uveitis regarding cataract surgery. Our results emphasize the importance of preventing CME preoperatively to achieve good postoperative visual acuity outcomes. A prospective study may help further elucidate the role of intraoperative IV methylprednisolone in reducing rates of postoperative CME and improving visual acuity outcomes in the postoperative period.

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Footnotes and Disclosure:

The authors have no proprietary or commercial interest in any materials discussed in this article.

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