

# FOLLOWING UP AFTER CATARACT SURGERY



Could the examination on postoperative day 1 be omitted?

BY HILIT KERNER LAVI, MD; AND GUY KLEINMANN, MD

## DO WE NEED DAY-1 POSTOPERATIVE FOLLOW-UP AFTER CATARACT SURGERY?

Grzybowski A, Kanclerz P<sup>1</sup>

*Industry support: No*

### ABSTRACT SUMMARY

In order to assess whether the examination 1 day after cataract surgery could be eliminated, Grzybowski and Kanclerz analyzed 45 articles that were published between 1994 and 2017 for the prevalence of postoperative complications. The most commonly reported complications were corneal edema, postoperative uveitis, IOP elevation, cystoid macular edema, and posterior capsular opacification.

Grzybowski and Kanclerz stated that most of the postoperative complications did not require early surgical intervention. They concluded that the peer-reviewed literature currently does not support a requirement for follow-up 1 day after uneventful phacoemulsification cataract surgery by experienced surgeons for patients without posterior synechiae or chronic or recurrent uveitis. The investigators stated that patients not scheduled for follow-up on postoperative day 1 should receive a potent topical steroid and that patients with glaucoma, particularly those whose optic nerves have preexisting damage, should receive a combination of topical IOP-lowering drops.

### DISCUSSION

Cataract extraction is the most commonly performed elective operation worldwide. A typical postoperative protocol includes examinations at 1 day, 7 days, and 4 to 6 weeks after routine surgery in order to identify a possible threat to the patient's vision that could require surgical or medical intervention.<sup>2,3</sup> Any reduction in the requirement for routine examinations could result in significant health care cost savings, and it could have a significant impact on the health, comfort, and finances of patients, especially those who must travel long distances for eye care.

Grzybowski and Kanclerz concluded that it would be possible to omit the visit on postoperative day 1 in certain patients and situations if cataract surgery was uneventful, but patients and surgeons may not feel comfortable with this change in protocol. The UK Royal College of Ophthalmologists identified coexisting diseases and monocular status as the main indications for a follow-up examination on postoperative day 1. In contrast, the AAO has stated that enough significant complications occur during the early period after cataract surgery to justify an examination on the first postoperative day.

## STUDY IN BRIEF

- ▶ In an analysis of 45 articles published over a 23-year period, researchers found that most of the complications after cataract surgery were transient and did not require immediate intervention. The investigators therefore concluded that it would be possible to omit the follow-up examination 1 day after uncomplicated cataract surgery for patients without coexisting diseases (glaucoma and uveitis) if doing so accords with the surgeon's preferences and patients are thoroughly educated on the signs and symptoms that require an immediate examination.

### WHY IT MATTERS

Examining patients 1 day after cataract surgery comes at a cost to patients, medical practices, and health care systems, both financially and in terms of the time required. Patients who must travel long distances to obtain eye care face an additional challenge. If the examination on postoperative day 1 could be safely eliminated in certain situations, the savings could be substantial.

Complications that require intervention are rare and tend to be easily recognized by patients.

Regardless of postoperative protocol, before surgery, patients should be educated on the importance

of returning for an examination when serious postoperative complications occur.

## EARLY POSTOPERATIVE INTRAOCULAR PRESSURE ELEVATION FOLLOWING CATARACT SURGERY

Grzybowski A, Kanclerz P<sup>4</sup>

Industry support: No

### ABSTRACT SUMMARY

For this review article, Grzybowski and Kanclerz evaluated the risk factors for and the course of IOP elevation during the early period after cataract surgery that have been reported in the literature. Some of the trends enumerated in their report are listed here.

In the event of a postoperative elevation in IOP, the pressure typically began to rise 3 to 7 hours after cataract surgery, and the increase generally lasted for 24 hours. In high-risk populations, the reported incidence was as high as 46.4% of cases.<sup>5</sup> Elevated IOP might have accounted for 88% of early postoperative complications.<sup>6</sup> Increased IOP after cataract surgery has been defined in most studies as an IOP above 30 mm Hg and/or a 50% and/or 10 mm Hg increase over the preoperative level.<sup>6-12</sup>

One risk factor identified for elevated IOP after cataract surgery was a residual OVD that blocked the trabecular meshwork. Dispersive OVDs were more likely than cohesive OVDs to cause a postoperative increase in IOP because of the former's tendency to adhere to tissue, especially behind the lens implant.<sup>13</sup>

Elevated IOP was reported to be more common after extracapsular cataract extraction with a sutureless scleral tunnel than after phacoemulsification with a sclerocorneal suture. Elevated IOP occurred two to five times more

often when the cataract procedure was performed by an inexperienced surgeon, probably because a release of iris pigment and serum proteins damaged the trabecular meshwork.<sup>14,15</sup>

General risk factors identified for increased IOP 2 to 24 hours after cataract surgery included a high baseline IOP.<sup>16</sup> Patients with glaucoma and/or pseudoexfoliation were more likely to experience a postoperative IOP spike.<sup>5,17-19</sup> An axial length greater than 25 mm was another risk factor, possibly because of a breakdown of the blood–aqueous barrier or decreased ocular rigidity and a smaller increase in anterior chamber depth compared with shorter eyes.<sup>20</sup> The topical administration of steroids in steroid responders was an additional risk factor, and the increase in IOP in these cases occurred from as early as postoperative day 5 to as late as several weeks after surgery.<sup>21</sup>

Tamsulosin intake was an additional risk factor. Patients with benign prostatic hyperplasia who were using

this medication were 2.6 and 3.8 times more likely to experience an increase in IOP of more than 10 mm Hg or an IOP of 30 mm Hg or higher, respectively, after cataract surgery than patients who did not use tamsulosin.<sup>12</sup>

### DISCUSSION

Grzybowski and Kanclerz suggested that, when cataract surgery is uneventful and the risk factors they identified in their review are absent, it may be possible to omit the examination on postoperative day 1.

Despite the evaluation of several treatment regimens in various studies, no protocol has been established to prevent postoperative IOP spikes completely. Based on their review, Grzybowski and Kanclerz recommended administering a fixed combination of dorzolamide and timolol along with brinzolamide in high-risk patients, particularly those with preexisting damage to the optic nerve. ■

## STUDY IN BRIEF

- A review article identified several risk factors for increased IOP after cataract surgery, including glaucoma, pseudoexfoliation, residual OVD, resident-performed surgery, an axial length greater than 25 mm, tamsulosin intake, and topical steroid application in steroid responders. Several of the studies reviewed recommended administering a fixed combination of topical dorzolamide and timolol along with brinzolamide in high-risk patients, but no treatment regimen was found to be completely effective at preventing an IOP spike.

### WHY IT MATTERS

Early increases in IOP are common after cataract surgery. Recognizing risk factors for this complication can help surgeons to identify which patients require treatment in advance, and it may allow some patients to skip the examination on postoperative day 1.

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