

# Avoiding Iatrogenic Injury During IOL Removal



A pearl for this not uncommon occurrence could reduce the risk of patient injury.

BY JOHN W. KITCHENS, MD

Secondary surgical removal of a dropped IOL from the posterior segment carries a risk of iatrogenic injury, and plate-haptic IOLs in particular elevate this risk. The silicone material of these IOLs makes them difficult to grasp, and forceps must come very close to the retinal tissue to grasp the IOL during removal, risking a retinal injury or tear. In addition, this technique allows wide-angle viewing to be used for the entire case, as opposed to switching from a high-magnification contact lens when grasping the IOL on the surface of the retina to a wide-angle lens when removing it from the eye. Over the years, I have found this technique to be particularly useful for safely and effectively removing these lenses from the posterior segment.

I start with 25-gauge chandelier lighting (Alcon) and perform a full vitrectomy, ensuring that a posterior vitreous detachment has occurred. Then, with a 25-gauge soft-tip aspiration cannula (Alcon), I use suction to engage the IOL on the optic surface. With suction applied and a vacuum created, I lift the IOL to the middle of the vitreous cavity (Figure 1). With the IOL safely away from the retina, I can then use either 20-gauge reusable IOL forceps or 25-gauge Max-Grip Forceps (Alcon) to grasp the IOL in my other hand and to maneuver it into the anterior chamber (Figure 2).

I do not cut the lens during this procedure, but rather remove the IOL from the eye intact. This requires

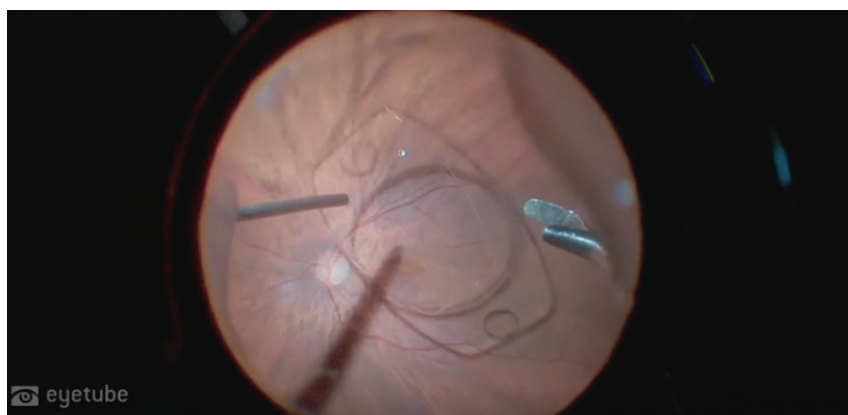


Figure 1. A soft-tip cannula can be used to grasp a plate-haptic IOL that has fallen into the posterior segment.

creating a large incision (Figure 3), which some surgeons wish to avoid. However, because I usually implant a replacement IOL that requires a large incision such as an anterior chamber IOL or a large rigid PMMA IOL such as the CZ70BD (Alcon), the large incision is needed to insert the new IOL.

I prefer larger lenses in most of my cases due to familiarity with the procedure, stability of these larger and rigid IOLs, and the age and corneal status of the patients. Plate haptics can easily be cut or folded and removed from smaller incisions should surgeons prefer to go that route.

## AT A GLANCE

- ▶ Use of a soft-tip cannula and chandelier lighting during removal of a fallen plate-haptic IOL may reduce the risk of creating a posterior break during surgery.
- ▶ Removing the IOL intact requires a large incision that can accommodate insertion of a large IOL.
- ▶ Presenting this case to a panel of experts allowed the author to tease out details of the technique.

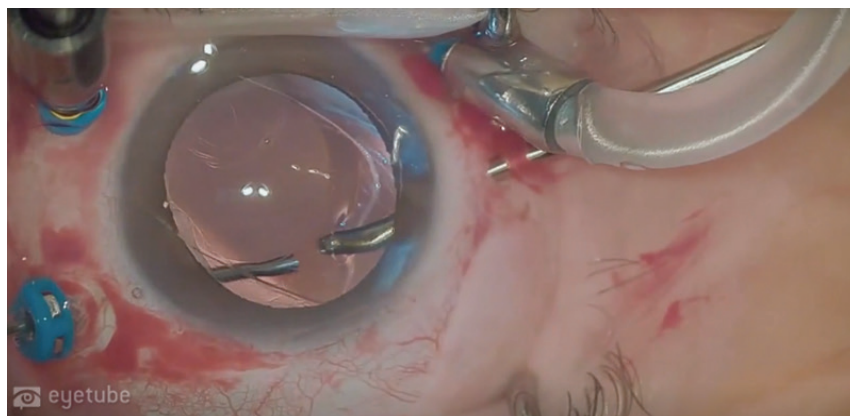


Figure 2. After the IOL is lifted from the surface of the retina with a soft-tip cannula, it is brought to the middle of the vitreous cavity, where it can be more safely maneuvered.

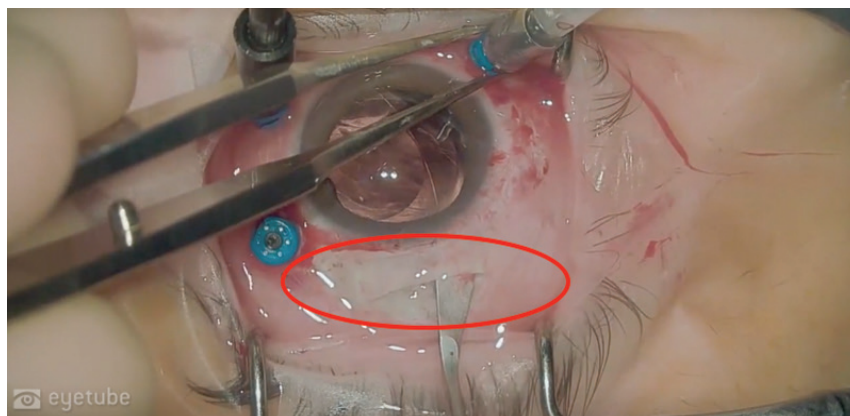


Figure 3. The large incision (red circle) used to remove the intact plate-haptic IOL accommodates insertion of an anterior chamber IOL or a rigid PMMA lens.



Figure 4. The panel of surgeons who reviewed this video at the Alcon Film Festival included Donald J. D'Amico, MD; María H. Berrocal, MD; and Timothy G. Murray, MD, MBA. The author is seated on the right side of the stage.

### EXPERT PANEL COMMENTS

When I presented this procedure at the Alcon Retina Film Festival, a panel of surgical experts weighed in (Figure 4).

Donald J. D'Amico, MD, inquired about the risk of damaging the retina by dropping the IOL after grasping it with the soft-tip cannula. This does occur, in which case it is necessary to

regrasp the IOL and try again. The light pipe or another instrument can be used to help manipulate the IOL when lifting it into the anterior chamber. But in my experience, dropping the IOL in this situation does not present much risk to the patient. I have not seen iatrogenic injury secondary to a dropped IOL during secondary surgery.

## RETINA TODAY ON THE ROAD

This article is adapted from a lecture the author presented at the Alcon Retina Film Festival during the AAO Annual Meeting. To watch Dr. Kitchens's video presentation, visit [bit.ly/Kitchens0120](http://bit.ly/Kitchens0120).

María H. Berrocal, MD, agreed with my assessment that plate-haptic IOLs are difficult to cut because the material is hard and the lens is slippery. She noted that she cuts flexible acrylic IOLs when she removes them.

Timothy G. Murray, MD, MBA, agreed that creating a large incision is appropriate for extraction if another large lens will have to pass through the wound. He said that, rather than cutting an acrylic IOL before removal, he folds the lens and removes it through a small incision. He noted that he does so only in cases in which he will then implant a foldable acrylic lens through the same incision.

### AVOIDING RISK, NOT SLOWING DOWN SURGERY

Reducing the risk of iatrogenic injury is paramount during secondary surgery to remove a dropped IOL. However, we must also prioritize efficiency and efficacy. Use of the soft-tip cannula, in my hands, is safer and more efficient than using forceps to directly grab the IOL off the surface of the retina, and it has no observed effect on the final efficacy of the intervention. The technique described here may be appropriate for cases in which the surgeon wishes to reduce the risk of iatrogenic injury during IOL retrieval and replacement. ■

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