RAISING THE BAR WITH A VERSATILE NEW HANDPIECE

The INTREPID Transformer I/A Handpiece gives you the flexibility to operate coaxially or bimanually.

BY JOHN BERDAHL, MD

Cataract surgery is one of the most successful surgeries in medicine. We consistently achieve excellent outcomes safely and efficiently, so the bar is already high. Consequently, any changes we consider incorporating into our surgeries, whether in instrumentation or technique, need to produce incremental improvement that will help us raise that high bar even higher. The INTREPID Transformer I/A Handpiece (Alcon; Figure 1) has done that for me.

Figure 1. John Berdahl, MD, uses the INTREPID Transformer I/A Handpiece in coaxial mode during surgery.

Flexibility in the OR

One of the challenges we all face is not knowing how an eye will behave until we start a case. Those of us who are primarily coaxial surgeons know that situations arise where a bimanual approach would be preferable, but often we do not have the tools readily available to switch. When faced with persistent subincisional cortex while in coaxial mode, for example, we may have to torque the incision or the eye to gain access and remove the cortex. Although we eventually find a way to complete the task, our maneuvers are not so gentle on the eye or easy on the surgeon.

When using the Transformer I/A Handpiece, I can switch from coaxial to bimanual mode within seconds without coming out of the eye, changing tubing

To view the surgical videos, go to: eyetube.net/video/NVMON • eyetube.net/video/BRGID • eyetube.net/video/JYKOY

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and settings, disrupting the surgery, or adding time to the procedure. I can easily remove subincisional cortex without putting additional stress on the primary incision or changing the contour of the eye. The Transformer gives me the flexibility to be the surgeon I am most comfortable being, as each case warrants.

One Handpiece, Multiple Benefits

The Transformer looks like a typical coaxial I/A handpiece (Figure 2A), but with just a twist and a pull, it becomes a bimanual instrument, separating into two individual components: an irrigation sleeve, which remains in the primary incision, and a polymer-tipped aspiration port, which is inserted into a secondary incision (Figure 2B). In coaxial mode, the Transformer enables us to perform one-handed cortex removal. In bimanual mode, the sleeved portion of the handpiece maintains chamber stability while the transformed aspiration port is free to enter a side incision.

In my opinion, the Transformer I/A Handpiece in bimanual mode is at its very best in cases with loose zonules and sticky cortex. Pseudoexfoliation cataract is a great example of where this instrument really shines, because I can operate at the ideal angle to remove cortex while exerting the least amount of tension on the zonules.

Another benefit of the Transformer in bimanual mode is that I can use the polymer-tipped aspirating port to polish the underside of the anterior capsule. I believe polishing residual lens epithelial cells from the underside of the anterior capsule helps prevent capsular phimosis and minimizes postsurgical inflammation. With the Transformer, I can accomplish this without trading out instruments in the eye. This is one of those incremental advantages that I welcome.

I have also found that in bimanual mode, the incision is not disrupted. When I am implanting IOLs with the use of the ORA SYSTEM (Alcon), I obtain more predictable readings from the aberrometer and am more likely to get closer to my refraction goals. I also like to use bimanual technique to make micro adjustments to a toric IOL while aligning it.

Capsular-friendly Polymer Tip

I switched to the disposable, single-use polymer tip for all of my coaxial surgeries years ago, and it has been great (Figure 3). Not only is it forgiving if you engage the posterior capsule, but it also allows you to polish the posterior capsule quite aggressively with little risk of rupturing it. The same smooth polymer tip that we have used for years for coaxial irrigation and aspiration is also part of the Transformer Handpiece.

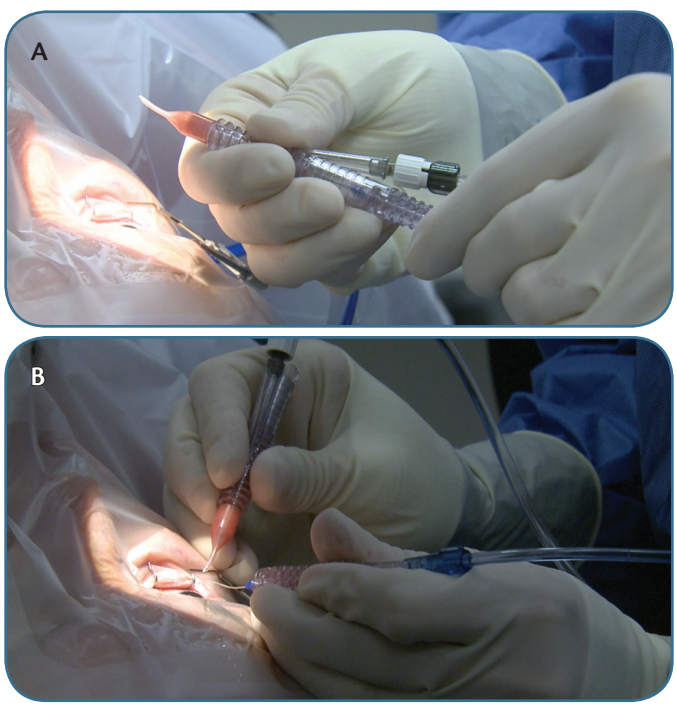

Figure 2. John Berdahl, MD, holds the INTREPID Transformer I/A Handpiece in coaxial mode (A) and bimanual mode (B).

Figure 3. The INTREPID Transformer I/A Handpiece has a capsular-friendly polymer tip.

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Performing Double Duty

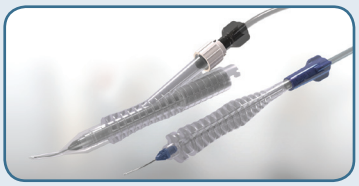

Figure. The INTREPID Transformer I/A Handpiece functions as a coaxial irrigation and aspiration tip and a bimanual irrigator and aspirator.

The INTREPID Transformer I/A Handpiece functions as a good coaxial irrigation and aspiration tip, but the magic behind it is that it also functions as an excellent bimanual irrigator and aspirator (Figure). With just a twist and a pull, you get the performance benefits of both modes during the same procedure.

- **Coaxial Performance**
  - All of the advantages of the Alcon INTREPID polymer technology
  - Smooth, capsular-friendly tip
  - Enhanced irrigation flow
  - Accessibility to cortical material in the majority of clock hours
- **Bimanual Performance**
  - Greater access to subincisional cortex
  - Increased capsular polishing flexibility via the polymer-tipped bimanual aspirating port
  - Flexibility to switch the aspirating handpiece to the other side to access any remaining cortex.

Advances in Efficiency

If I were to describe in one word the overarching advantage to using the Transformer I/A Handpiece, it would be efficiency, which is particularly important for those of us who operate in ambulatory surgery centers.

First, being able to switch back and forth from coaxial to bimanual mode with one instrument as I see fit during a procedure is very efficient.

Second, if I am spending time trying to remove stubborn cortex either subincisionally or from an area where the angle of approach is not ideal, the Transformer I/A Handpiece in bimanual mode will help me get a proper angle. Being able to make the transition quickly and easily facilitates a more physiologic and efficient surgery with the potential for better outcomes.

Third, the Transformer allows me to polish the posterior side of the anterior capsule in 360° without needing to use a different instrument to accomplish that.

An Intuitive Instrument

It is quite easy to incorporate the Transformer I/A Handpiece into your OR to determine if it will bring value to your surgery day. There is really no downside.

The learning curve is minimal because the instrument is so intuitive. The hand position is not much different from what you usually use with your second instrument and your main incision for disassembly of the cataract.

My only suggestion is for surgeons whose primary and secondary incisions are closer together. I recommend that you make your incisions around 90° apart, because the foremost advantage of bimanual irrigation and aspiration is getting the subincisional cortex, and if your primary and secondary incisions are too close together, your angle of approach will not be ideal. As an example, my sideport incision is 1 mm, and I place it about 100° to the left of my primary incision.

Conclusion

The Transformer I/A Handpiece is helping to raise the already high bar of cataract surgery by facilitating some of the incremental advancements that will make a positive difference in outcomes. Gentler manipulations of the eye, faster and more thorough removal of residual lens epithelial cells, more precise toric IOL alignment, and less postoperative inflammation are some of the benefits, in my experience, of this instrument that will contribute to better, more predictable outcomes. ■

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CENTURION® Vision System

CAUTION: Federal (USA) law restricts this device to sale by, or on the order of, a physician.

As part of a properly maintained surgical environment, it is recommended that a backup IOL Injector be made available in the event the AutoSert® IOL Injector Handpiece does not perform as expected.

Indication: The CENTURION® Vision system is indicated for emulsification, separation, irrigation, and aspiration of cataracts, residual cortical material and lens epithelial cells, vitreous aspiration and cutting associated with anterior vitrectomy, bipolar coagulation, and intraocular lens injection. The AutoSert® IOL Injector Handpiece is intended to deliver qualified AcrySof® intraocular lenses into the eye following cataract removal.

The AutoSert® IOL Injector Handpiece achieves the functionality of injection of intraocular lenses. The AutoSert® IOL Injector Handpiece is indicated for use with the AcrySof® lenses SN6OWF, SN6AD1, SN6AT3 through SN6AT9, as well as approved AcrySof® lenses that are specifically indicated for use with this inserter, as indicated in the approved labeling of those lenses.

Warnings: Appropriate use of CENTURION® Vision System parameters and accessories is important for successful procedures. Use of low vacuum limits, low flow rates, low bottle heights, high power settings, extended power usage, power usage during occlusion conditions (beeping tones), failure to sufficiently aspirate viscoelastic prior to using power, excessively tight incisions, and combinations of the above actions may result in significant temperature increases at incision site and inside the eye, and lead to severe thermal eye tissue damage.

Good clinical practice dictates the testing for adequate irrigation and aspiration flow prior to entering the eye. Ensure that tubings are not occluded or pinched during any phase of operation.

The consumables used in conjunction with ALCON® instrument products constitute a complete surgical system. Use of consumables and handpieces other than those manufactured by Alcon may affect system performance and create potential hazards.

AEs/Complications: Inadvertent actuation of Prime or Tune while a handpiece is in the eye can create a hazardous condition that may result in patient injury. During any ultrasonic procedure, metal particles may result from inadvertent touching of the ultrasonic tip with a second instrument. Another potential source of metal particles resulting from any ultrasonic handpiece may be the result of ultrasonic energy causing micro abrasion of the ultrasonic tip.

ATTENTION: Refer to the Directions for Use and Operator's Manual for a complete listing of indications, warnings, cautions and notes.

ORA SYSTEM® Important Product information

Caution: Federal (USA) law restricts this device to the sale by or on the order of a physician.

Indications: Federal (USA) law restricts this device to sale by, or on the order of, a physician.

Intended Use: The ORA SYSTEM® uses wavefront aberrometry data in the measurement and analysis of the refractive power of the eye (i.e. sphere, cylinder, and axis measurements) to support cataract surgical procedures.

Contraindications: There are no known contraindications for this device.

Warnings and Precautions: The following conditions may make it difficult to obtain accurate readings using the ORA SYSTEM®.

- Patients having progressive retinal pathology such as diabetic retinopathy, macular degeneration, or any other pathology that the physician deems would interfere with patient fixation;
- Patients having corneal pathology such as Fuchs', EBMD, keratoconus, advanced pterygium impairing the cornea, or any other pathology that the physician deems would interfere with the measurement process;
- Patients for which the preoperative regimen includes residual viscous substances left on the corneal surface such as lidocaine gel or viscoelastics;
- Visually significant media opacity, such as prominent floaters or asteroid hyalosis, will either limit or prohibit the measurement process; or
- Patients having received retro or peribulbar block or any other treatment that impairs their ability to visualize the fixation light.
- Use of iris hooks during an ORA SYSTEM® image capture will yield inaccurate measurements.

In addition:

- Significant central corneal irregularities resulting in higher order aberrations might yield inaccurate refractive measurements.
- Post refractive keratectomy eyes might yield inaccurate refractive measurement.
- The safety and effectiveness of using the data from the ORA SYSTEM® have not been established for determining treatments involving higher order aberrations of the eye such as coma and spherical aberrations.
- The ORA SYSTEM® is intended for use by qualified health personnel only.
- Improper use of this device may result in exposure to dangerous voltage or hazardous laser-like radiation exposure. Do not operate the ORA SYSTEM® in the presence of flammable anesthetics or volatile solvents such as alcohol or benzene, or in locations that present an explosion hazard.

Attention: Refer to the ORA SYSTEM® Operator's Manual for a complete description of proper use and maintenance, as well as a complete list of contraindications, warnings and precautions.

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