The Annual ACES/SEE Caribbean Eye Meeting presents hot topics for anterior segment surgeons and healthcare professionals.

This year's meeting will be held from January 31st to February 3rd, 2025, at the JW Marriott Los Cabos Beach Resort & Spa in San José del Cabo, México. Join Program Chairs William Wiley, MD, and Robert Weinstock, MD, along with other well-known leaders in ophthalmology to discuss important topics in eye care and earn CME/COE credits while connecting, recharging, and elevating your practice in unparalleled tropical splendor. The following summary of a presentation from the 2024 meeting provides a taste of the programming at Caribbean Eye. Use the QR code to access the videotaped recording of this and other key talks from the meeting.

MICOR: A NEW NON-ULTRASOUND APPROACH TO CATARACT REMOVAL

Emerging technologies that are showing promise.

By I. Paul Singh, MD

Cataract surgery has come so far from the days of intracapsular cataract extraction with large incisions, and phacoemulsification has become so advanced, it's hard to know where we innovate from here.

Let me introduce the MICOR 700, the first handheld lens removal device (ZEISS; Figure 1). It has no base unit and no foot pedal—everything is at your fingertips in the handpiece. This is not phaco. There is no ultrasound. The cutter tip of the MICOR 700 oscillates at kilohertz speeds in an asymmetric movement to remove cataractous lenses without cavitation. Thus, the MICOR 700 reduces thermal stress in the eye and minimizes the risk of thermal damage to tissues. Furthermore, the tip is rounder than those of traditional phaco handpieces to better protect intraocular tissues and to widen the comfort zone for operating in the capsular bag (Figure 2). ZEISS calls this procedure NULEX (non-ultrasonic lens extraction).

LESS SETUP TIME IN THE OR

The MICOR 700 is designed to be "plug-n-play" in the OR; there is very little to set up or sterilize. The standalone, battery-operated handpiece is disposable. Each one comes in a sterile pack, and it's ready to use once it's connected to the drive and a BSS source. The fluidics system is also fully disposable. Most notably, the MICOR 700 requires minimal capital expenditure and no service requirements, nor does it need a backup system.

EFFICIENT CATARACT REMOVAL

I have been very impressed by the stability of the anterior chamber with the MICOR device. Its infusion is fed by gravity, not pressure, and its short tubing requires much less fluid. The handpiece applies constant irrigation through two side ports that funnel the fluid in a V-shaped pattern that maintains chamber stability and corrals nuclear material to the tip.

The cataract disassembly technique differs slightly from that with a traditional phaco handpiece. Because the rounded tip of the MICOR 700 does not facilitate grooving the nucleus, I use a second instrument, a Kuglen hook, to crack and chop the nucleus instead. This may present a bit of a learning curve for surgeons who are used to the divide-and-conquer technique. I keep the MICOR's tip in the middle or anterior third of the chamber to allow the irrigation flow to help bring pieces to the tip.

The silicone tip is well designed for I/A and very safe for the capsule, in my opinion. I always say, don't fear the capsule, but respect the capsule. The tip has very good control; I've been comfortable using it to polish the capsule and to chase small pieces left in the subincisional cortex. In my experience, the tip has very good followability, the chamber remains stable, and the procedure is very efficient.

CONCLUSION

There is a bit of a learning curve with the MICOR 700, but colleagues and I have found that our fluid usage and cataract removal time improved very quickly, and overall, the procedure is very efficient. I am currently participating in a study with the MICOR device to evaluate its fluid usage, cataract removal time, and Day 1 postoperative results. The Zeiss MICOR 700 is FDA-approved and commercially available in the US. ■

Figure 1. The new ZEISS MICOR 700 handheld lens extractor.

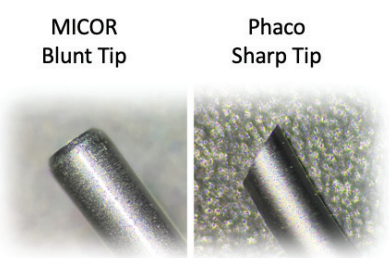

Figure 2. The MICOR 700 has a rounded, blunt cutting tip compared to standard sharp phaco tips.

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