

The Kim Dual Chopper



Since Dr. Kunihiro Nagahara introduced horizontal chopping more than a decade ago, cataract surgeons have devised several other nucleus-fragmenting techniques, including vertical- and quick-chop methods.

In traditional horizontal phaco chop, the nucleus is impaled with

the phaco tip using high-vacuum ultrasound. A hook-shaped chopper, placed at the equator of the lens, is moved toward the phaco tip in the horizontal plane. The nucleus is compressed between the two instruments and fractures along a natural cleavage plane.

per is driven toward the phaco tip in the vertical plane, a shearing mechanism cleaves the nucleus.

Although effective, both of these techniques have disadvantages. The horizontal chop requires the positioning of the chopper peripherally under the anterior capsule, which can be difficult and dangerous, especially early in the learning curve.

a traditional-style horizontal chopper. Both have specially designed rounded tips to prevent posterior capsule damage.

The spatula tip is small enough to easily enter a standard paracentesis incision. It's designed to chop the nucleus in the horizontal plane from a central location, without traversing peripherally under



the anterior capsule.

Here's how the modified quick-chop technique works: While the nucleus is impaled with the ultrasound tip in a central location under high vacuum, the spatula tip is slid into the nucleus alongside the ultrasound tip. (The central positioning prevents the potential complications of a traditional horizontal chop technique.) Simply moving the tip in the horizontal plane efficiently cleaves the nucleus. The horizontal motion also avoids the potential disengagement of the nucleus.

The Kim Dual Horizontal/Quick Horizontal Chopper features two choppers on one handle: a thin, triangular spatula and a traditional-style horizontal chopper. This allows use of multiple techniques.

Faulty placement can lead to capsular rupture, vitreous prolapse and posterior migration of the nucleus. With the vertical chop, it's often difficult to maintain impalement of the nucleus with the phaco tip during the chopping maneuver. Also, vertical chopping instruments typically have sharp tips that can unintentionally damage the capsular bag.

A Safer Alternative

To address these disadvantages, working with Pelion Surgical, I've designed a new chopping instrument and a modified horizontal quick-chop technique that may help surgeons transition to phaco chop cataract surgery more successfully. (I have no financial interest in the Kim Dual Horizontal/Quick Horizontal Chopper or Pelion Surgical.)

The new instrument, which is made of titanium, features two choppers on one handle to allow the use of multiple techniques: a unique thin, triangular spatula and

the anterior capsule.

These benefits are especially helpful during difficult cases, such as those involving dense, brunescient nuclei, loose or brittle zonules, or small pupils.

Shortening the Learning Curve

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Hopefully, this modified approach will let surgeons adopt the phaco chop technique more quickly and safely, letting them reap the benefits of clearer corneas that result when using less ultrasound energy. ◊ M

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Features and Benefits

- ▶ Provides two multifunction choppers on a single handle: a unique triangular tip designed to perform a modified, horizontal quick chop, and a traditional horizontal phaco chopping tip. This allows the use of multiple approaches for nucleus separation.

- ▶ The triangular tip lets you chop the nucleus in the horizontal plane from a central location without having to traverse peripherally under the anterior capsule.

- ▶ Rounded tips prevent posterior capsule damage.

- ▶ Titanium construction ensures a long, rust-free life.