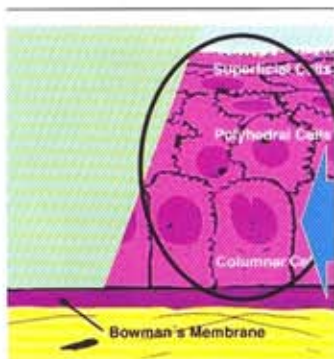


## Operative Technique

The KA-ASA technique is straightforward to perform. The free cap of epithelium is created by adjusting the translation stopper of the keratome to reduce the hinge size to as close to 0 as possible. This will, on occasion,



**FIGURE 3** The epithelial boundary left by the epi-keratome is remarkably clean and precise compared to the boundary left by a brush, spatula, or alcohol technique.

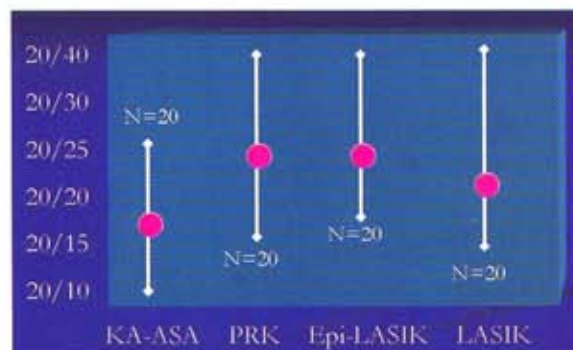
leave a small hinge that has to be broken. When this is the case, the results are similar to PRK. In the future, epi-keratomes can be modified to provide different ring sizes and hinge settings to achieve a free cap of epithelium in the majority of cases.

After the epi-keratome pass, care should be taken not to touch the epithelial edge with an instrument. (The aim is to preserve the viability of the cells.) Bowman's layer should be gently wiped with a spatula

so it is glistening. Avoid a dry sponge that can dehydrate the corneal surface.

After the laser ablation is performed, I apply ice to the cornea to reduce pain. This can be accomplished by soaking Merocel® sponges in balanced salt solution (BSS) and placing the package in the freezer. When needed, a frozen sponge or "popsicle" can be taken from the package and applied to the cornea for 10 seconds. After that, it is lifted off the eye for a few seconds and then put back on the eye for a total of three 10-second applications.

If it is to be used in the case, this is the point at which I apply mitomycin C to prevent corneal haze. I use mitomycin C 0.2 mg/ml for all corrections greater than -5 D. Be-



**FIGURE 4** Visual acuities at 15 minutes after surgery.

tween -5 and -8 D, I apply the mitomycin C for 15 seconds. Above -8 D, I apply it for 30 seconds. Before applying the mitomycin C, the bed is dried with a moist sponge; then the mitomycin is applied on a circular disc. After the designated

exposure time the surface of the eye is irrigated with BSS. I then begin the prophylaxis regimen with a nonsteroidal anti-inflammatory drop and a fluoroquinolone antibiotic.

A bandage soft contact lens is then inserted. (I use an Acuvue® lens with the 8.4-mm base curve.) It is important that the contact lens fit relatively tightly—if there is more than 0.5 mm of movement, the patient may be uncomfortable. The contact lens can be removed when the new epithelium becomes fully intact, which is usually in 4-6 days. There is no problem leaving the contact in place for a day or two after the epithelium is intact.

I typically see the patient on the first postoperative day and then on the sixth postoperative day. After surgery I give the patient a tetracaine minim to be used if needed in the first 24 hours and the patient is put on a fluoroquinolone antibiotic (eg, moxifloxacin 0.5%) to be taken four times a day for 1 week. I also prescribe a topical steroid (eg, fluorometholone 0.1%) to be taken four times a day at the outset. For corrections up to -6 D, the steroid is tapered over 1 month; for corrections greater than -6 D, patients taper the steroid over 2 months. I encourage the use of preservative-free artificial tears for the first few months following surgery.

## KA-ASA TECHNIQUE

- ✓ Make epithelial free cap and discard
- ✓ Wipe Bowman's with a spatula—do not touch epithelial edge
- ✓ Ablate
- ✓ Use balanced salt solution "popsicle" to cool
  - Three applications
  - 10 seconds each
- ✓ Mitomycin C (0.2 mg/mL) for corrections > -5 D.
  - -5 to -8 D, apply 15 seconds
  - corrections > -8 D, apply for 30 seconds
- ✓ Relatively tight bandage soft contact lens
- ✓ Tetracaine minim to use as needed during first 24 hours
- ✓ Fluoroquinolone antibiotic for 1 week
- ✓ Steroid
  - Corrections up to -6 D: taper over 1 month
  - Corrections > -6 D: taper over 2 months
- ✓ Patients use nonpreserved artificial tear for several months

## THE BOTTOM LINE

KA-ASA appears to be a safe and effective form of surface ablation. In preliminary studies it provides faster visual recovery than other forms of surface ablation. It is theorized that this is due primarily to the sharply defined epithelial border with very few injured cells compared to LASEK or PRK. This makes for rapid, uncomplicated healing. In addition, the procedure is quick and provides an excellent surface for ablation.

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