

COLOR PLATES

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Figure 1. With traditional hydrodissection, the cleavage plane is between the cortex (which remains adherent to the lens capsule) and the epinucleus.

Figure 2. Fine's cortical cleaving hydrodissection is accomplished by physically elevating the anterior capsule *before* injecting balanced salt solution. When properly performed, the cleavage plane will be between the capsule and the cortex, leaving the cortex adherent to the epinucleus rather than the capsule.

Figure 3. The tell-tale sign of successful hydrolineation is the "golden halo" sign. It represents the red reflex as seen through the fluid space that now occupies the area between the endonucleus and the epinucleus.

Figure 4. This figure illustrates "how not to do it." Originally made several years ago, it shows that we used to think the peripheral extent of the central groove should go out into the epinucleus. Experience has taught us well that it need only go out to within about 1 mm of the peripheral endonucleus, stopping well short of the "golden halo" area.

Figure 5. The central groove can be made much more efficiently and safely if done in two segments. Do not attempt to get very deep *centrally* with the first segment. Employ the WIN philosophy, and create a good peripheral central groove for this first segment. Then spin the lens 180 degrees (can go clockwise or counter clockwise) to put yourself in good position to complete the central groove.

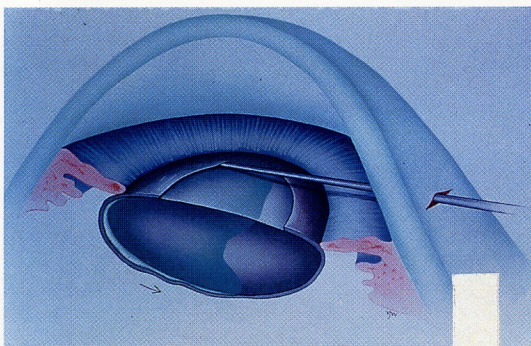


Figure 1.

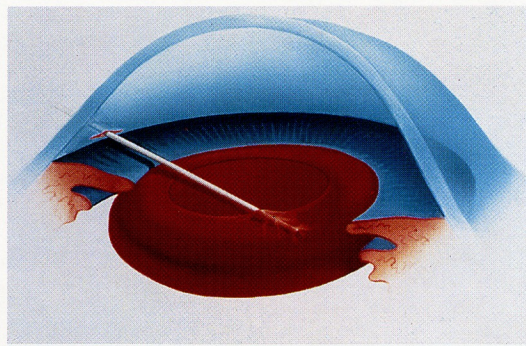


Figure 2.

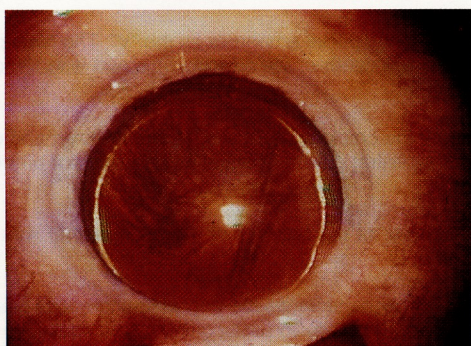


Figure 3.

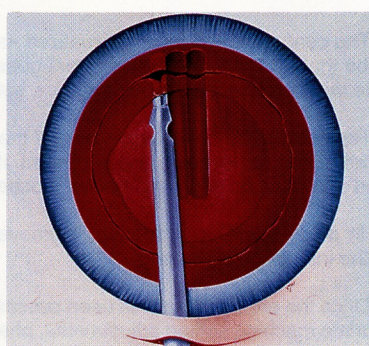


Figure 4.

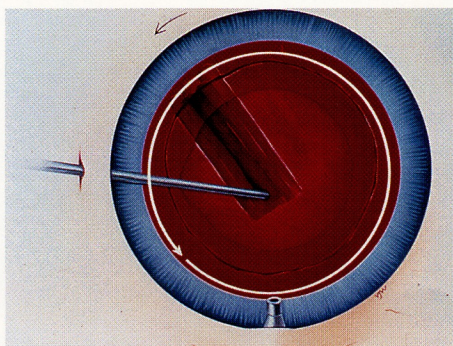


Figure 5.







Figure 6. The central groove can be visualized as the “central valley,” putting special emphasis on the “V”. The ideal profile would be that of a V-shaped groove that goes down to at least 90% the depth of the *endonucleus* and is tapered to concentrate vector forces at its apex for easy, safe cracking.

Figure 7. Respecting the natural concavity of the underside of the lens, the cracking maneuver is that of down and out. The separation should be *easily* accomplished. If effort is required, the central groove (central valley) was not properly constructed and must be improved before proceeding further.

Figure 8. In preparation for quartering, a groove is made down the center of the first half of the nucleus that was rotated into the inferior capsular bag.

Figure 9. Once the endonucleus has been successfully quartered, the surgeon continues the WIN philosophy and makes the appropriate machine setting adjustments, phaco needle adjustments, and so on. To assist gaining safe access to the quarters, especially the first quarter that is sometimes “wedged” in place, viscoelastic materials can be used.

Figure 10. The epinuclear cataract is removed in segments. First the inferior, central rim is grasped (the blunter the phaco needle, the easier it is to grasp) and brought centrally where it is removed. The epinuclear cataract is rotated and the rim sequentially removed until its mass has been reduced enough that it can be easily flipped.



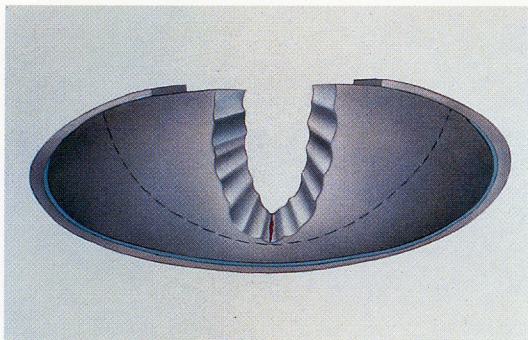


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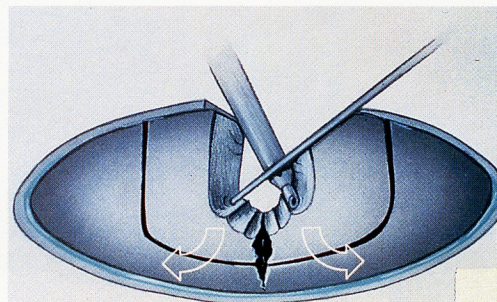


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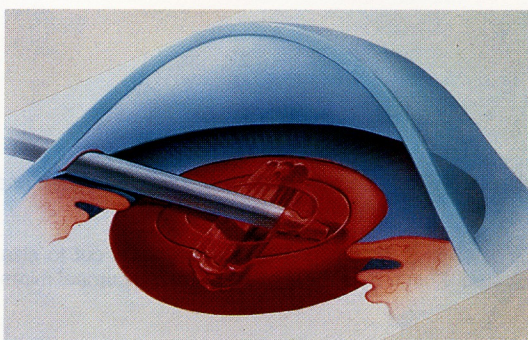


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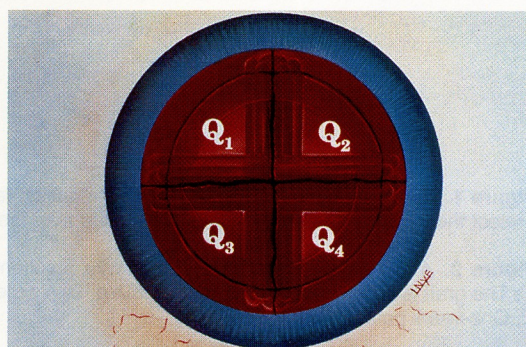


Figure 9.

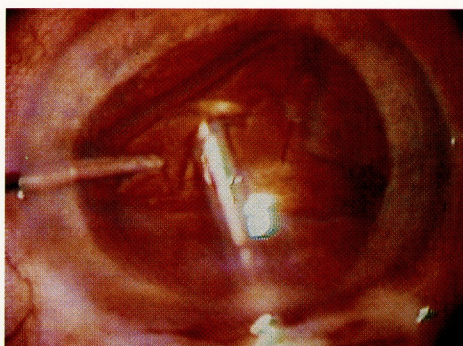


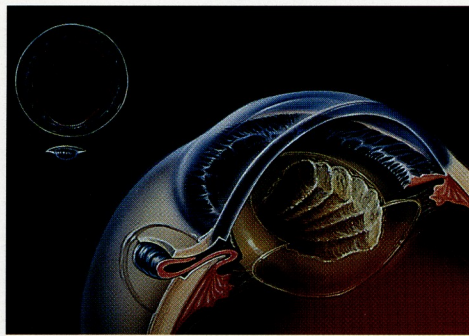
Figure 10.



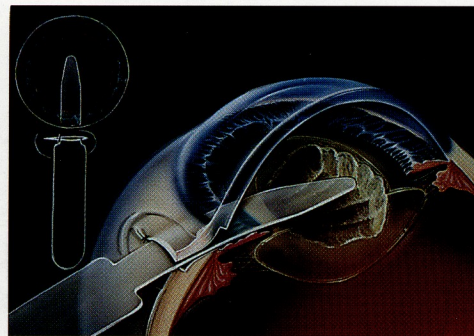
Figure 1. *A*, Iris prolapse. *B*, Placement of a modified lens glide (Visitech Phacoglide #1032) may help to reposit and protect the iris root. *C*, Safe phacoemulsification may then be possible. (Courtesy of R. Fichman, MD.)

Figure 2. *A*, An acute corneoscleral burn with resultant gaping wound. *B*, A homoplastic scleral graft is cut to size. *C*, The graft is secured with 10-0 nylon sutures. *D*, A watertight closure is confirmed. Note relatively round corneal mires. *E*, One-week postoperative result.

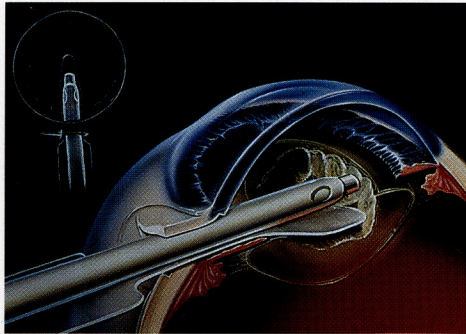




A



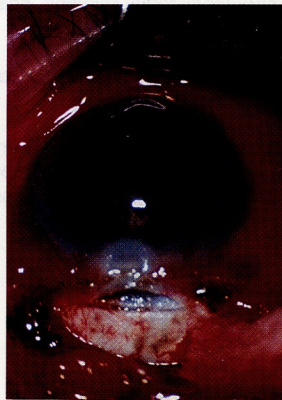
B



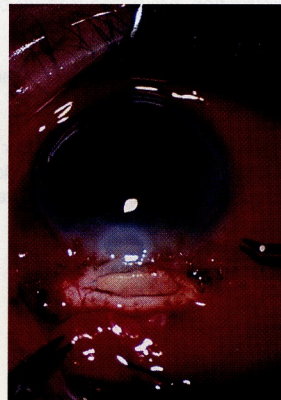
C

Figure 1.

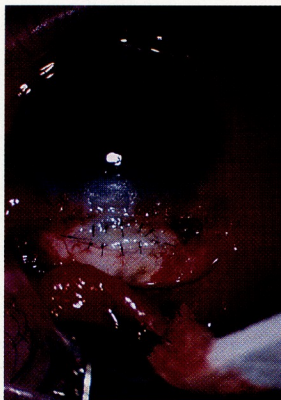
Color
Plate 3



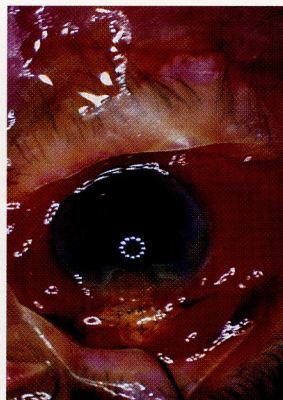
A



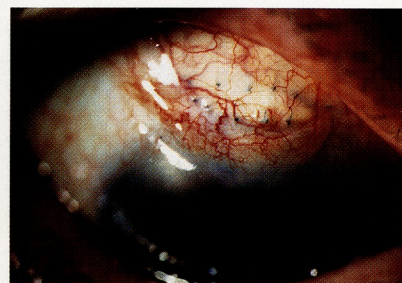
B



C



D



E

Figure 2.





Figure 3. A capsulorhexis lost out to the periphery (B). The capsulotomy may be saved by starting a new tear opposite the original, or central to the extension (A) and then reunited (A-C) to the original tear. (*Adapted from Arshinoff SA: Mechanics of capsulorhexis. J Cat Refract Surg 18:623-628, 1992; with permission.*)

Figure 4. Anterior capsular contraction syndrome treated by YAG laser radial relaxing incisions. A concentric capsulotomy may also be used.

Figure 5. A phacoglide (Visitech) may be used to support lens material in the face of a posterior capsular tear. Viscoelastic is also used. (Courtesy of R. Fichman, MD.)

Figure 6. As described by T. Neuhann, a posterior chamber IOL may be secured in the ciliary sulcus, despite a large tear in the posterior capsule, by placing the haptics into the sulcus and tucking the lens optic posterior to the intact anterior capsulorhexis. This placement improves lens stability as well as the anteroposterior location of the optic.



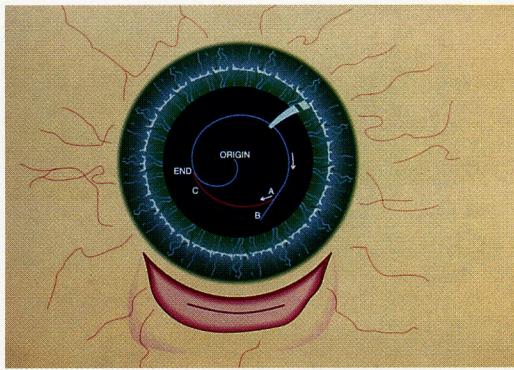


Figure 3.

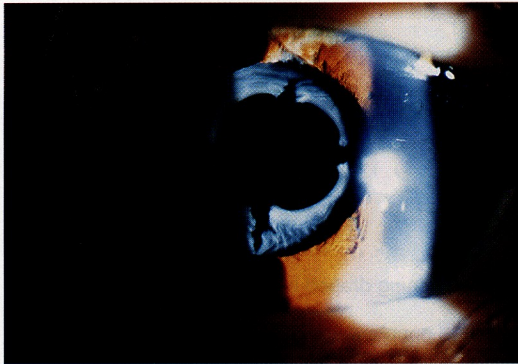


Figure 4.

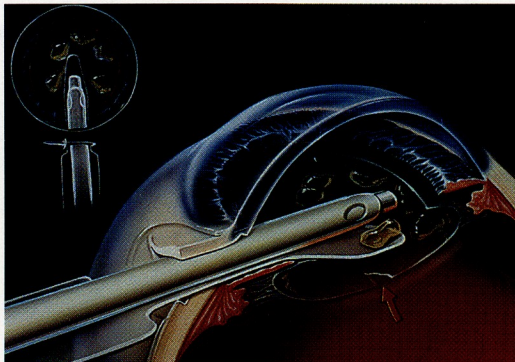


Figure 5.

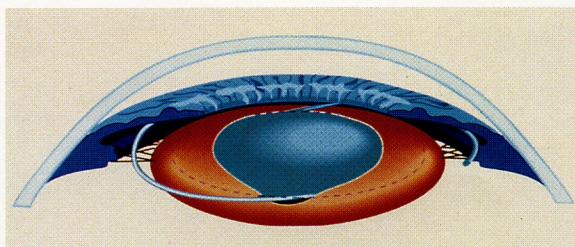


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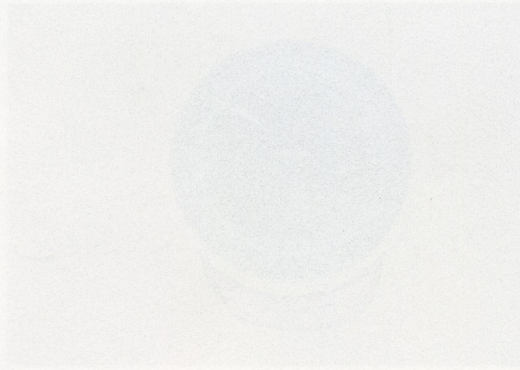


Figure 1. Corneal flap, hinged to the left, being draped back onto its bed.

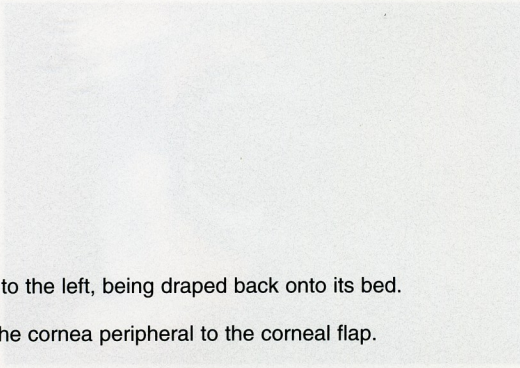


Figure 2. Gentle pressure on the cornea peripheral to the corneal flap.

Figure 3. Additional pressure with forceps on the peripheral cornea showing dimpling and striae in the corneal cap, indicating adherence of the cap to its underlying bed.



Figure 4. Initiation of pressure on the posterior lip of the corneal incision with the surgeon's index finger.

Figure 5. Very firm pressure on the posterior lip of the clear corneal incision with the surgeon's index finger, documenting the seal.



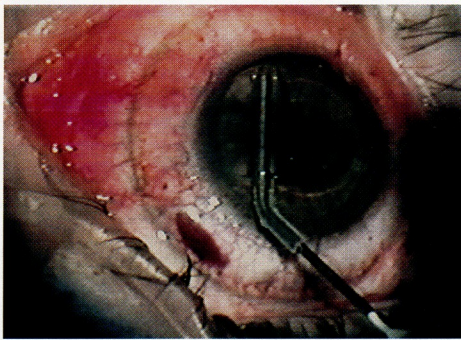


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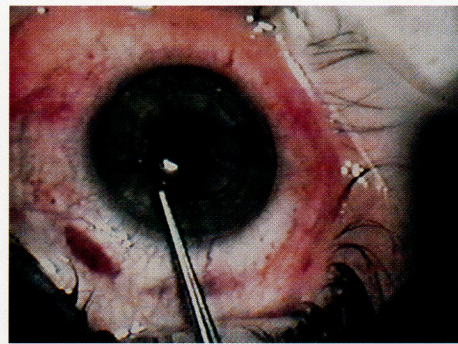


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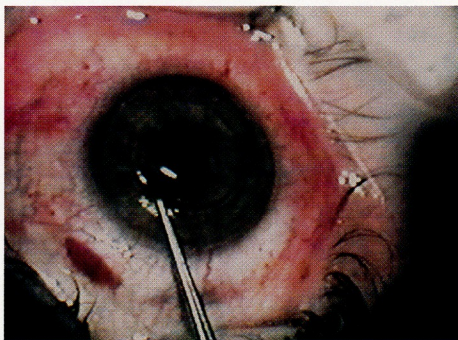


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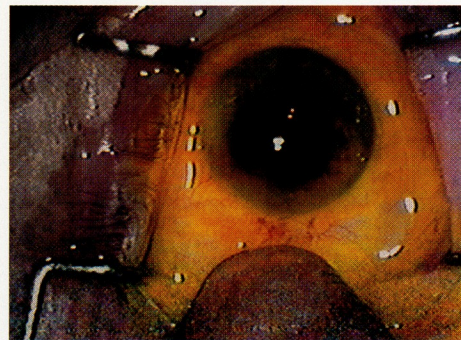


Figure 4.

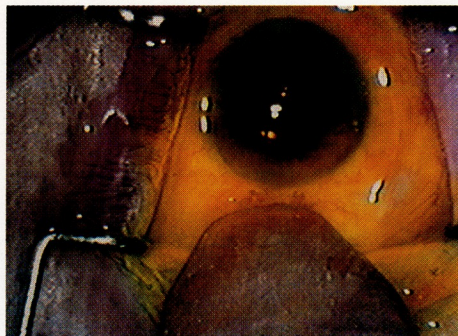


Figure 5.

Color Plate 5