

## Phaco Burn Surgical Strategy

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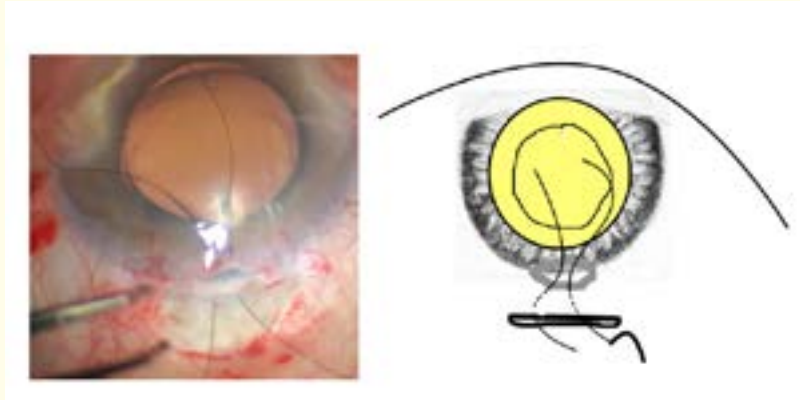
### Background

An infrequent and annoying complication of cataract surgery is an instantaneous phaco burn caused by a momentary blockage of the phaco needle or hand piece or a brief interruption of BSS inflow during phacoemulsification caused by a tight wound. In the latter case, a tell-tale sign of occlusion is the appearance of a cloud of white smoke at the tip of the phaco needle during emulsification. The surgeon should flush the hand piece and enlarge the incision to prevent compounding the problem, but a phaco burn has probably already distorted the incision. A typical phaco burn will cause opacification of the corneal tunnel and retraction of the corneal collagen, creating a wound gape which can cause leakage and anterior chamber collapse when viscoelastic is removed at the end of the case. Routing closure techniques such as mattress sutures may solve the problem of wound leak but induce large amounts of astigmatism. Tissue glue is not much better.

### Surgical technique

I propose an alternative suturing strategy for wound gapes caused by phaco burns: a transposition technique which will close the incision to water tightness without inducing astigmatism. By transferring the gape from the original corneal incision to nearby limbal sclera, even a large gape can be resolved. Simply complete the phacoemulsification and place the implant under viscoelastic. Before removing the OVD, which would cause collapse of the AC and possible corneal-IOL touch, I instill acetylcholine to constrict the pupil. I then make a small conjunctival peristome at the limbus next to the corneal incision to expose the adjacent sclera and perform wet field cautery to eliminate scleral vessels. I then make a limbal scleral incision 2 mm posterior to the original corneal incision and at least 50% scleral thickness in depth. This scleral incision must have a chord length greater than the original corneal incision to allow for the wound gape to transpose from the corneal to the scleral incision.

Figure 1 shows my suture placement which consists of two or three interrupted 10-0 nylon sutures passing from the anterior edge of the original corneal incision, through the posterior edge of that incision, then tunneled through the limbus and sclera to exit out the new scleral incision. Cut a generous length of suture for each pass. Now that the interrupted sutures are pre-placed, the OVD can be removed from the eye and each length of suture triple knotted tightly enough to transfer the wound gape from the original incision to the scleral incision as shown in figure 2. The incision will be watertight and leave no astigmatism. The knots are buried inside the scleral incision and the conjunctiva is closed with wet field cautery. The scleral gape will fill in overtime very nicely [1-4].



**Figure 1:** Suggested scleral incision and interrupted suture placement.



**Figure 2:** The gape is totally transferred from the cornea to the sclera with little or no astigmatic effect. Close the conjunctiva over the scleral gape and it will granulate in by primary intention.

### Financial Interests

The author has no financial interests in this procedure.

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