

Ocular Cobo Temporary Keratoprosthesis

	Product Code	Contact Diameter	Handle Length	<i>Designed with: Michael Cobo, M.D. Durham, NC</i>
	OCTK - 6.5	6.5mm	40mm	

Design

- The Cobo Temporary Keratoprosthesis is a truncated cone made of quartz and is autoclavable.
- Built into the keratoprosthesis is a superior groove that allows for suture fixation to the globe.
- The 21 gauge stainless steel infusion handle is used for injection of either fluid or gas for internal tamponade in the event of intraoperative hemorrhage or serious choroidal hemorrhage.
- The clear plano anterior surface allows intraoperative visualization of the posterior pole.

Technique

- An appropriately sized instrument should be available and prepared for each case of penetrating keratoplasty in anticipation of the onset of expulsive hemorrhage or effusion.
- Preparation of the temporary keratoprosthesis consists of injecting saline solution into the infusion line with a 5cc or 10cc syringe and a 21 gauge blunt needle which is attached and left in place.
- In the event of expulsive hemorrhage the keratoprosthesis is grasped by the infusion handle and placed into the trephination site while attempting to not incarcerate ocular tissue.
- Infusion of saline through the handle is used to increase the intraocular pressure, tamponading the evolving hemorrhage or effusion.
- After manual tamponade is obtained, the surgeon passes a 6-0 silk suture within the cornea midstromally, crossing over the keratoprosthesis, then passing through the cornea 180° away in a similar fashion, serving as an overlay mattress suture which will secure the keratoprosthesis.
- It is then permanently tied after placing the suture into the circumferential groove present near the top of the device.
- A similar suturing maneuver is carried out 90° away.
- The posterior pole can now be inspected to assess the presence or extent of choroidal effusion or hemorrhage.
- If the macula is not threatened, simple mechanical tamponade can be maintained until gradual reduction of IOP demonstrates that the process has halted.
- If the hemorrhage involves or threatens the macula, an attempt to drain the choroidal hemorrhage is undertaken.
- The conjunctiva is taken down 360°, and posterior sclerotomies are created underneath areas of evident hemorrhage or effusion.
- Infusion through the keratoprosthesis causes counter pressure to help control bleeding and also to assist in the drainage of blood or serous fluid transsclerally.
- Once the choroidal process has been stabilized, as evidenced by the gradual withdrawal of fluid through the syringe, while visualizing the posterior pole, the device can be removed and replaced with the donor corneal button.
- The keratoprosthesis can also be affixed to the trephination site as described above in the absence of choroidal hemorrhage or effusion for the purpose of viewing the posterior pole intraoperatively in cases where the posterior pole has not been adequately visualized preoperatively due to media opacity.
- Additionally, gas rather than saline can be injected, although a minified and variable view of the fundus is to be expected.

Cleaning & Disinfection

See Cleaning Method 6

