The Kahook Dual Blade® (KDB) is an ophthalmic surgical tool designed to make parallel incisions in the trabecular meshwork (TM) allowing for removal of a strip of diseased tissue

Below are a few tips that can help surgeons when first adopting the KDB for goniotomy procedures:

1. **Incision Size**
   - The preferred incision size for KDB is 2.0 – 2.4 mm
   - Mimics most incisions used for cataract extraction
   - A 2.2mm incision or larger will allow the surgeon to maneuver from side to side without oar-locking

2. **Before or After Cataract Extraction?**
   - KDB can be used in conjunction with other intraocular procedures including cataract extraction to perform goniotomy
   - When combined with cataract extraction, goniotomy performed with KDB can be used before or after completing phacoemulsification with intraocular lens(IOL) implantation.
   - Many surgeons new to goniotomy with KDB prefer to perform the procedure after phaco and IOL implantation due to a deeper chamber enhancing angle visualization.

3. **Microscope and Head Position**
   - Tilt the microscope 45˚ towards the surgeon and tilt the head of the patient 45˚ away from the surgeon to optimize angle visualization
   - Use higher magnification to observe details of the angle anatomy (Zoom in until the gonio lens takes up much of the view)

4. **Viscoelastic Choice**
   - Surgeons can use the typical viscoelastics they use for cataract extraction
   - Most surgeons choose a cohesive viscoelastic to keep the anterior chamber angle deeper. However, dispersive viscoelastic devices are also effective as long as reflux from the wound is limited
   - Surgeons may choose to leave 10-20% dispersive viscoelastic in the eye at the conclusion of the case to fill the drainage system in the early post-operative period. This will encourage flow into the collector channels rather than reflux of flow into the eye.
   - For more severe glaucoma, the surgeon may wish to use BSS in place of OVD as this may lead to elevated pressures for a longer period.
   - It is surgeon discretion as to how to manage reflux during the procedure.

5. **Corneal Striae**
   - Corneal striae can form when the gonio lens is pushed too hard against the cornea or when the anterior chamber is under pressurized.
   - To avoid this, allow the gonio lens to gently float on a bed of viscoelastic on the cornea and adequately inflate the anterior chamber with viscoelastic (aim for IOP of ~20-25mmHg)

This document is not meant to capture all aspects of performing goniotomy with Kahook Dual Blade®. This is intended for information purposes only and surgeon discretion and knowledge should be used during and after this procedure.

6. **Surgical Pearls and Techniques**
- KDB should enter the eye through a clear corneal incision and reach across the anterior chamber to the nasal TM
- The tip of the KDB can enter the TM at a 10° angle (angled up) and then the footplate is leveled gently against the anterior wall of the canal of Schlemm
- KDB is advanced while ensuring the two blades are engaging TM on either side to create parallel incisions
- Surgeons should target treating ~3-4 clock hours
- Watch this video for examples: https://www.youtube.com/watch?v=g-JCLj_F-Ic&index=3&list=PLCd-YL8lONdyFy-RWPmnJr0wIBJl5dZLA
- The following is a case example by John Berdahl early on in his experience with KDB: https://www.youtube.com/watch?v=ruZw-WK_f34

7. **Use of Miotics**
- Use of Pilocarpine 1-2% 1drop q5m x 3 preoperatively can provide for a clearer view of the angle at the time of KDB if used in standalone cases
- In cases combined with cataract extraction, miostat or similar miotic can be used intra-operatively to enhance the view of the angle

8. **TM Removal**
- The TM strip can be removed with intraocular forceps (rhexis forceps, micro forceps) or irrigated/aspirated out of the eye (for example with the cataract machine I/A tip)
- Avoid trying to extend KDB treated tissue by grasping with forceps and pulling.
- Tethered TM may be amputated by grasping and pulling radially and in the direction of the untethered point or multiple passes with KDB can be completed if needed to amputate tethered tissue. Avoid pulling the tethered TM centrally.

9. **Conclusion of Surgery**
- Inflate the anterior chamber to a pressure of 20-25mmHg to help direct flow towards the collector channels
- Hydrate the wounds to ensure they are water tight
- Patch and Shield as per routine

10. **Post-operative Drops**
- Steroids, NSAIDs, Antibiotics can be used as per the surgeon's routine. This often mimics the same routine used for cataract surgery
- One glaucoma drop (surgeon choice) can be used during the first post-operative weeks while the patient is using steroids to avoid steroid-response elevation in IOP. Steroids that are linked with a higher rate of spikes, should be used with caution. Any glaucoma medications used while the patient is on steroids should be tapered off when possible to achieve the best reduction in medications possible post goniotomy with KDB. Surgeon discretion should be used when managing IOP during the post-operative phase.

This document is not meant to capture all aspects of performing goniotomy with Kahook Dual Blade®. This is intended for information purposes only and surgeon discretion and knowledge should be used during and after this procedure.