

المؤتمر السنوي الدولي للجمعية الرمحية المصرية
INTERNATIONAL CONGRESS OF THE
EGYPTIAN OPHTHALMOLOGICAL SOCIETY

EOS 2023

بسم الله الرحمن الرحيم

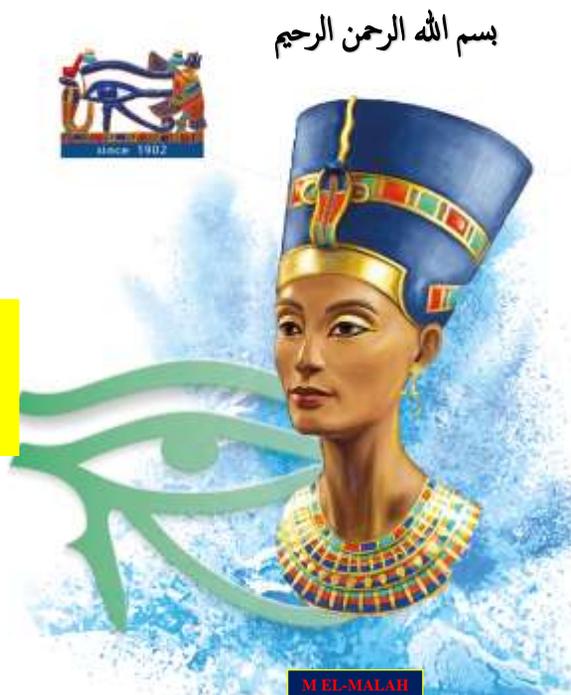
since 1902

KDB
AB-INTERNO GONIOTOMY

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SC Surgery Update (Course 3)

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**No financial interest
in this work**



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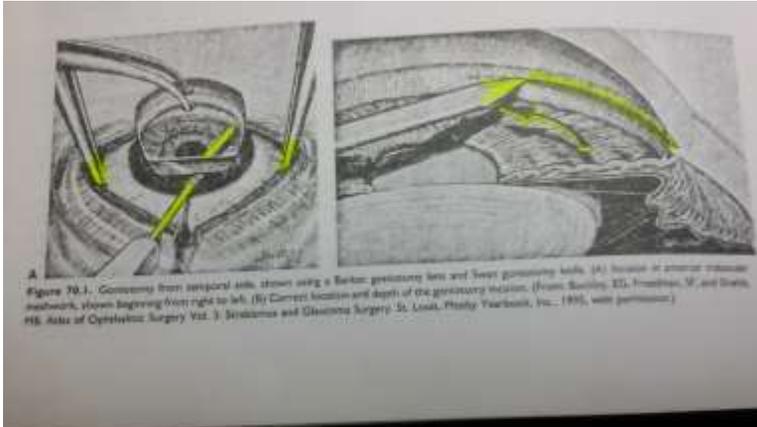


Figure 70.J. Goniotomy from temporal side, shown using a Berkeze goniotomy knife and Sweet goniotomy knife. (A) Incision at anterior trabecular meshwork, shown beginning (from right to left). (B) Correct location and depth of the goniotomy incision. (From: Buckley, ED, Freedman, M, and Smith, HE. Atlas of Ophthalmic Surgery Vol. 3: Strabismus and Glaucoma Surgery. St. Louis, Platy: Yearbook, Inc., 1995, with permission.)

SC surgery
started
1893

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INRODUCTION

- ◉ The Kahook Dual Blade (KDB) is a goniotomy knife designed to make parallel incisions in the TM and allows for creating a strip of tissue that can be removed from the angle.
- ◉ The incision size for KDB is 2.2-2.4mm, looks like Phaco.
- ◉ Can be combined with Phaco, and is better after finishing phaco.



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MICROSCOPE AND PATIENT

- ◉ Tilt the microscope 30-45⁰ towards the surgeon and tilt the head of the pt 30-45⁰ away from the surgeon
- ◉ This will line up the surgeons view through the gonioleins for enhanced angle visualization
- ◉ Higher magnification to observe details of the angle is preferred.



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VISCOELASTIC

- ◉ To maintain AC deep, Most surgeons choose a cohesive or dispersive viscoelastics.
- ◉ Washing VE material should be done.



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TECHNIQUE

- ◉ The tip of the KDB can enter the TM at a 10 degree angle (angled up) and then the footplate is leveled gently against the anterior scleral wall once the device is in the canal of schlemm.
- ◉ The footplate is advanced while ensuring the two blades are engaging TM on either side to create parallel incisions
- ◉ After 2-3 clock hours, the KDB is reversed to come back from the opposite side.

TECHNIQUE

- ◉ Miotics to close pupil.
- ◉ The TM strip can be removed with intraocular forceps (rhaxis forceps) or irrigated/aspirated out of the eye
- ◉ Multiple passes with KDB can be completed if needed to amputate any tethered tissue

AT THE END

- Inflate the AC to a pressure of 20-25mmHg to help push any refluxed blood into the collector channels
- Hydrate the wounds to ensure they are water tight
- Postop ttt as usual as antibiotics and steroids.



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ANIMATION

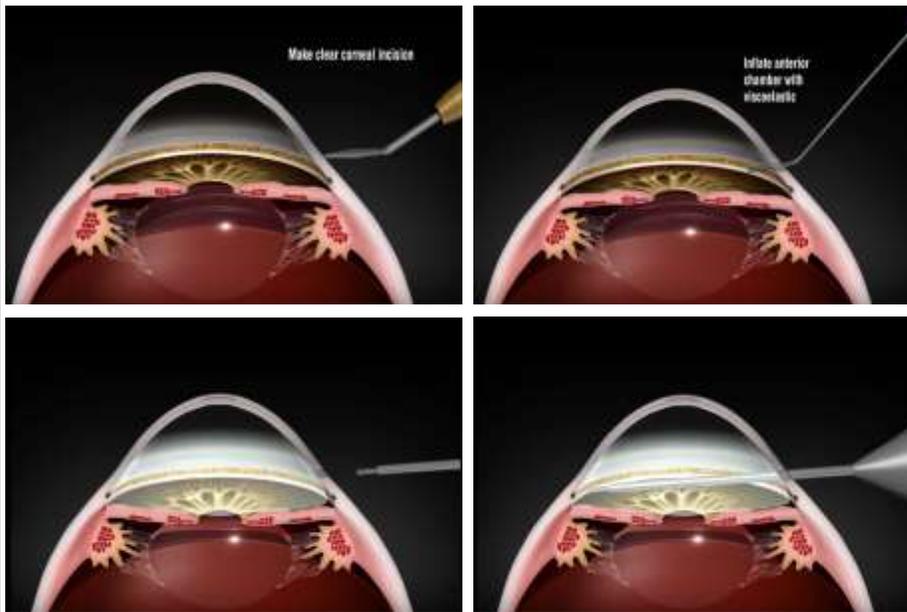
Kahook Dual Blade™



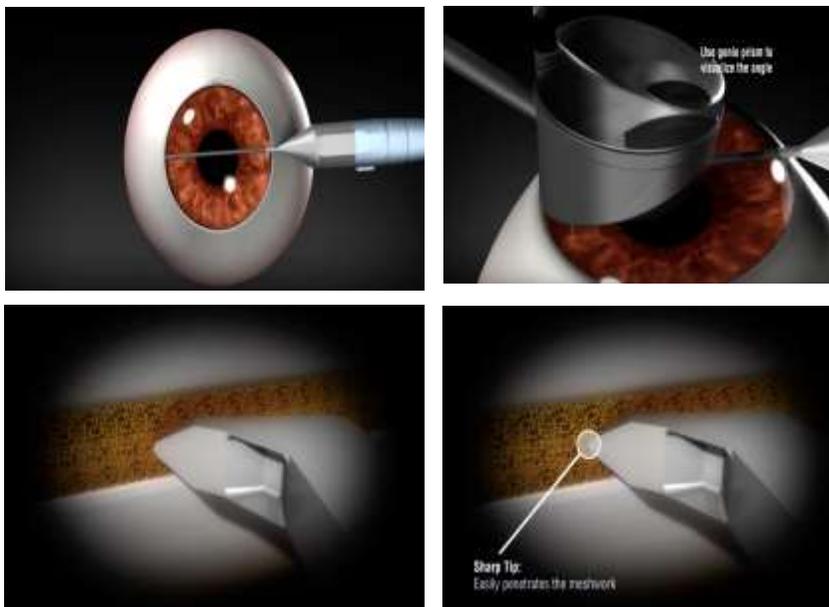
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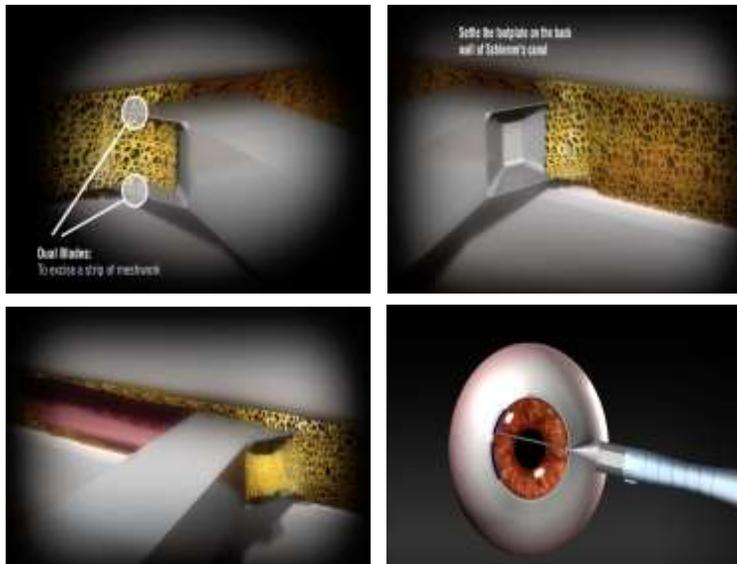
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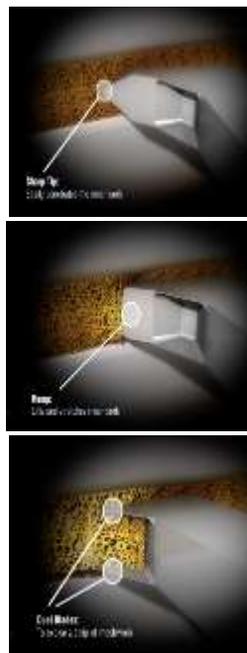
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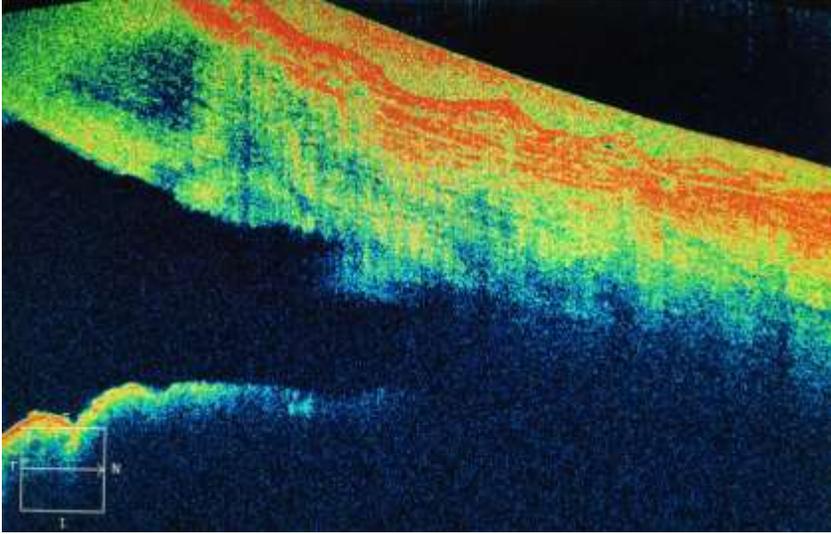
DESIGN FEATURES

- ◉ Pointed Tip
 - Pierces TM
- ◉ Ramp
 - Elevates & stretches TM
- ◉ Dual Blades
 - Excises strip of TM
- ◉ Foot Plate/Heel
 - Prevents damage to the anterior wall of the canal



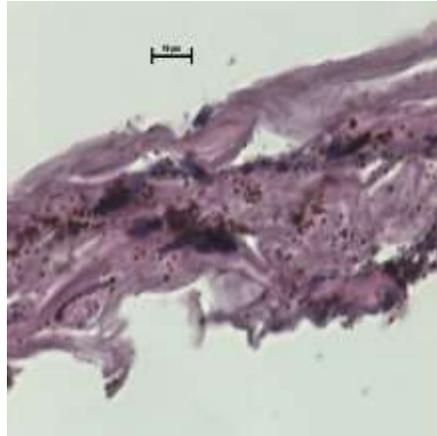
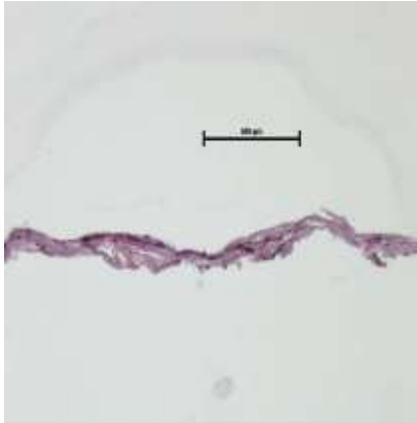
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AS-OCT POST-KDB



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TM ANALYSIS



KDB allows for harvesting TM strips for study purposes if desired



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Goniotomy is the indicated (clear cornea) and has a high success rate.

Goniotomy, Ab-int. KDB



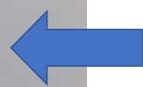
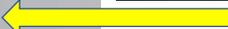
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Part X: Diagnosis and Treatment of Glaucoma in Children

Table 69.4
Surgical Results in Congenital Glaucoma (age < 1 year)

	Date	Eyes	Success (%)	
			1st	2nd
Goniotomy				
Barkan	1953	185	80	
Haas	1955	253	77	
Bietti	1966	321	82	
Stuffer	1967	100	85	
Morin	1980	171	56	76
Anderson	1982	16	81	100
McPherson	1983	24	33	83
Trabeculectomy				
Harms	1969	30	93	88
Gregerson	1977	21	100	100
Anderson	1982	25	76	100
McPherson	1983	23	87	

Modified from DeLuxe and Anderson (7).



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Gonioscopy

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VIDEO ONE

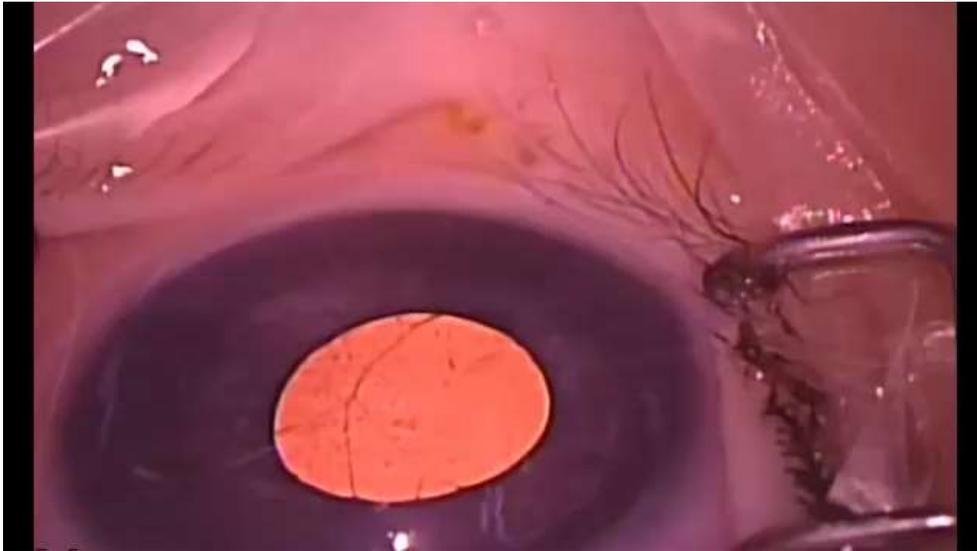
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- ◉ Female child, 2 ms old
- ◉ PCG
- ◉ Preop IOP was 26.6 mmHg
- ◉ Goniotomy was done using KDB at Jul, 2019
- ◉ 1st postop exam dated 4 wks later revealed:
 - Clear cornea
 - Opened angle
 - IOP 14 mmHg
- ◉ 2 months later IOP was 14 mmHg as previous follow up.
 - **See next ...**



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1ST VIDEO, LT EYE



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○ Rt eye, same child

- Female child, 2 ms old - PCG
- Preop IOP was **26.0 mmHg**
- Goniotomy was done using KDB at Aug, 2019
- 1st postop exam 1 month, revealed:
 - Clear cornea
 - Opened angle
 - IOP **12 mmHg**
 - **See next ...**

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TAKE HOME MESSAGE

- ◉ Goniotomy is amazing glaucoma operation.
- ◉ Gonioscopy is a must for glaucoma surgery.
- ◉ SC is the secrete.
- ◉ KDB is a good new technique with short learning curve.
- ◉ We should catch new techniques and trying to do it to judge.

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THANKS

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