



Trabeculectomy

Trabeculectomy - the Moorfields Safer Surgery System
Professor Peng Tee Khaw



Glaucoma filtration surgery was previously performed when patients had uncontrolled intraocular pressures on maximally tolerated medical treatment, or after failed laser trabeculoplasty. The main reasons for delaying surgery were the risk of post-operative complications associated with standard trabeculectomy procedures and high failure rates for operations in certain sub-groups of glaucoma patients. Technical modifications to the trabeculectomy procedure including adjustable suture techniques combined with the use and techniques of applying powerful antimetabolites now enable the surgeon to have much greater control of both the operation and post-operative scarring.

With Professor Peng Tee Khaw, Duckworth and Kent has a complete set of instruments for a system of glaucoma surgery known as the Safer Surgery System that has evolved at Moorfields Eye Hospital in London. The safer surgery system's development is based on a need to improve the consistency. The use of strong antimetabolites such as Mitomycin-C (MMC) during trabeculectomy increases the risk of potential

complications, including hypotony, visual loss, uncomfortable blebs and leaking blebs that may lead to endophthalmitis. The Safer Surgery System is designed to preserve visual acuity by minimizing hypotony and bleb-related complications while achieving a desirable postoperative intraocular pressure. A video demonstrating the procedure can be found at: www.duckworth-and-kent.com/videos
Mitomycin-C is not FDA licenced for use in glaucoma surgery

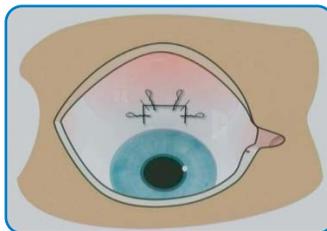
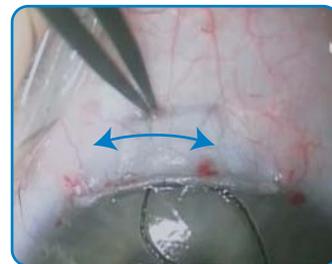
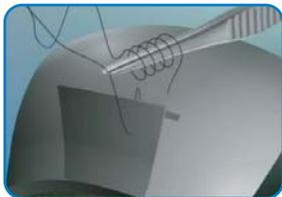
2-502N Khaw Transconjunctival Adjustable Suture Control Forceps



- 5.0mm highly polished tying platforms with a flared tip
- For massaging and adjusting intraocular pressure to desired level
- Adjustable Suture Control technique
- Straight shafts
- Standard handle, length 85mm



Tying the adjustable suture



The scleral flap adjustable sutures allow the tension to be adjusted post operatively through the conjunctiva with specially designed forceps with very smooth edges. The adjustable suture system allows a gradual titration of the intraocular pressure – more gradual than that seen with suture removal or massage. The video by Prof. P T Khaw demonstrating the tying of this adjustable suture is available at www.duckworth-and-kent.com/videos

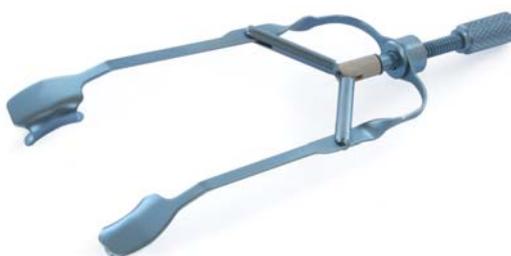
9-576 Khaw Standard Glaucoma Surgery Speculum



- 14.5mm solid blades
- Angled to rest temporally
- Adjustable with thumb screw

Khaw Glaucoma Surgery Speculum has a central indent and side notch to achieve maximal exposure for glaucoma surgery and minimize pressure on eye. The small speculum (9-576-1) is suitable for use with small palpebral apertures and children.

9-576-1 Khaw Small Glaucoma Surgery Speculum



- 7.5mm solid blades
- Angled to rest temporally
- Adjustable with thumb screw

2-686 Khaw Small Conjunctival Clamp



- Interlocking jaw design
- Tip width 4.0mm
- Single handed action
- Overall length 74.5mm

The Khaw Conjunctival Clamp (2-686 shown above) holds back and protects the conjunctival edge during antimetabolite application. Extremely useful during fornix based conjunctival incisions.

2-687 Khaw Large Conjunctival Clamp



- Interlocking jaw design
- Tip width 12.0mm
- Single handed action
- Overall length 74.5mm

7-101 Khaw Descemet Membrane Punch



- Designed to punch 0.5mm x 0.3mm
- Particularly suited when small sclerostomy required (e.g. thin sclera, small scleral flap)
- Punch action can be repeated to create larger sclerostomy
- Can be used with a short scleral tunnel incision
- Squeeze action handle activates shaft to punch

Khaw Small Descemet Membrane Punch (7-101) is particularly suited when small sclerostomy required (e.g. thin sclera, small scleral flap)



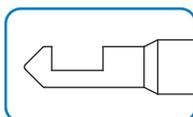
7-102 Khaw Descemet Membrane Punch



- Designed to punch 0.75mm x 0.5mm
- Can be used with a short scleral tunnel incision
- Squeeze action handle activates shaft to punch
- Round squeeze handle, length 131mm

Additional Descemet Membrane Punches

7-105 DK Descemet Membrane Punch

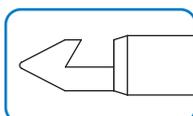


- Designed to punch 0.7mm x 1.2mm
- Squeeze action handle activates shaft to punch



- Round squeeze handle, length 131mm

7-106 Jacobs Descemet Membrane Punch



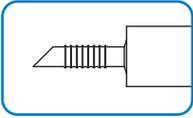
- Designed to punch 1.2mm x 0.85mm
- Squeeze action activates shaft to punch

Chisel profile of leading edge allows easy entry into the scleral tunnel. Angled blade profile allows secure engagement of deep anterior tunnel edge.



- Round squeeze handle, length 131mm

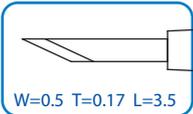
8-616 Ogawa Infusion Cannula



- 20 gauge, thin wall, 0.9mm diameter x 4.0mm length
 - Straight shaft, 45° bevelled tip
 - Grooves in cannula body ensure non-traumatic securing of cannula
 - Silicone tubing and luer fitting supplied
- Controlled Fluid Flow, positive pressure infusion where necessary



4-610 DK Retractable Diamond Knife, 25° Single Edge



W=0.5 T=0.17 L=3.5

- 0.5mm wide 25° single edge diamond
 - Retractable long handle
 - Length 123.5mm
- Designed for delicate dissection of tissue



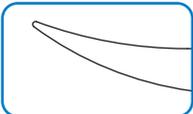
6-608 DK Scleral Pocket Knife



- 1.0mm x 1.0mm oval round blade, blade thickness 0.1mm
- 45° angled shaft, tip to angle length 3.0mm
- Round handle, length 118mm



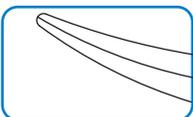
3-205 DK Needle Holder (curved)



- 7.0mm delicate curved jaws
- Round handle, tag spring
- Length 107mm



1-510 Westcott Style Tenotomy Scissors (curved)



- Blunt tips, curved blades
- Cut length 12.0mm, blade length 20.0mm
- Standard handle, length 116mm



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at the Leading Edge