

Ophthalmology instruments

TONY

SIDE PORT ENTRY BLADE

straight knife with a sharp pointed tip and cutting on one side.

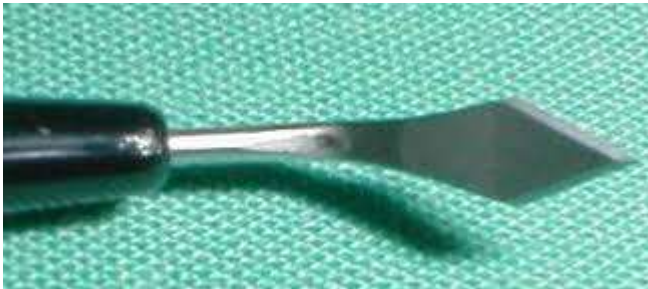
Uses.

It is used to make a small valvular clear corneal incision (commonly called as *side port incision*) in *phacoemulsification* and *other* intraocular surgeries including pars plana vitrectomy.



KERATOME

diamond-shaped blade with a sharp apex and two cutting edges



USES

- **Valvular corneal incisions** for entry into the anterior chamber for all modern techniques of cataract extraction
- **self-sealing incisions** for phacoemulsification and manual SICS operation.

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TONY

CRESCENT KNIFE

blunt-tipped, bevel up knife having cut-splitting action at the tip and both the sides

Uses:

It is used to make tunnel incision in the sclera and cornea for phacoemulsification, manual small incision cataract surgery (SICS), and sutureless trabeculectomy.



IOL DIALER

Uses: (i) It is used to dial

the PMMA non-foldable IOL for proper positioning

in the capsular bag or ciliary sulcus. (ii) It can also be

used to manipulate the nucleus in phacoemulsification

surgery



CHOPPER

resembling sinskey hook in shape. The inner edge of the bent tip is cutting and may have different angles.

Uses. It is used to split or chop the nucleus into smaller pieces and also for nuclear manipulation in phacoemulsification surgery.



WIRE VECTIS

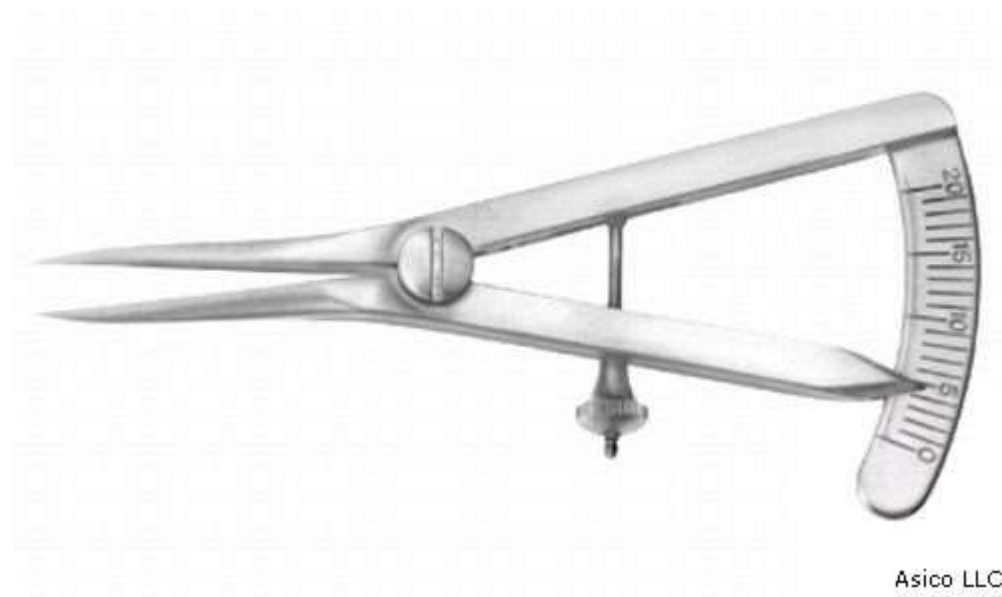
It is wire loop attached to a metallic handle.

Uses: It is used to remove dislocated or subluxated lens. and nucleus in ECCE.



Castroviejo calliper

It is used to take measurements during squint, ptosis, retinal detachment and pars plana vitrectomy surgery. It is also used to measure corneal diameter and visible horizontal iris diameter.





Corneo scleral forceps

Uses: These are used to hold

the cornea or scleral edge (of incision) for suturing

during cataract, glaucoma, repair of corneal and/or

scleral tears and keratoplasty operations.



CAPSULORHEXIS FORCEPS

AFTER A FLAP LENS CAPSULE IS RAISED USED
FOR HOLDING LENS CAPSULE



IRIS REPOSITOR

Handle with blade & blunt end

Uses

- to reposit iris in AC after intra ocular surgery
- To break synechiae at pupillary margin



SIMCOE CANNULA

IRRIGATION AND ASPIRATION OF LENS
MATTER IN ECCE



SUPERIOR RECTUS HOLDING FORCEPS

S-shaped double curve near the tip.

TOOTHED FORCEPS

Uses:

- hold the superior rectus muscle while passing a bridle suture under it;
- to stabilize the eyeball during any operation such as cataract surgery, glaucoma surgery, corneal surgery



SUPERIOR RECTUS HOLDING FORCEPS



IOL HOLDING FORCEPS

It is a spring action
forceps with short, blunt and curved blades
having
smooth edges and tips with platform (no
teeth
or serrations). Use:
To
hold optic of non-foldable
PMMA
IOL during implantation.



NEEDLE HOLDING FORCEPS



de Wecker's scissors

They are fine

scissors with small blades directed at right angles to

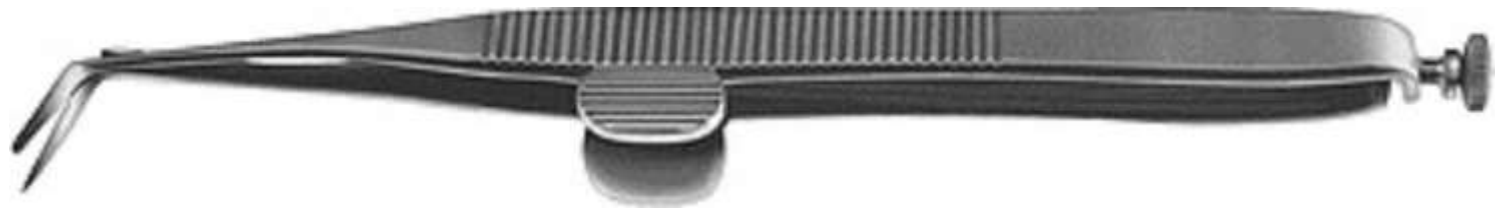
the arms. The blades are kept apart, making V-shape,

by spring action.

Uses: It is used to perform iridectomy,

iridotomy and to cut the prolapsed formed vitreous

and pupillary membrane.



Corneal scissors or section enlarging scissors

Uses: (i) These are used

to enlarge corneal or corneoscleral incision
for

conventional intracapsular and extracapsular
cataract

extraction (sparingly performed procedures
now-aday)

cataract surgery.

(ii) To enlarge corneal incision

In keratoplasty operation.

(iii) To cut the scleral and trabecular
tissue in trabeculectomy.



WIRE SPECULUM

Uses. *Eye speculums are used to keep the lids apart*

during:

Any intraocular operation such as cataract surgery

and glaucoma surgery.

Any extraocular surgery e.g., squint surgery, pterygium surgery.

Enucleation and evisceration operation.

Removal of conjunctival and corneal foreign bodies.

Cauterization of corneal ulcer.

Examination of the eye in a patient with blepharospasm.



Lacrimal probes (Bowman's)

These

are a set of straight metal wires of varying thickness

(size 0-8) with blunt rounded ends and flattened

central platform. **Uses: (i) To probe nasolacrimal duct**

in congenital blockage. (ii). To identify the lacrimal

sac during DCT and DCR operations.



Bone punch

Uses:

It is used to enlarge the bony opening during DCR operation by punching the bone from margins of the opening



Lacrimal sac dissector and curette

is a cylindrical instrument, one end of which is a blunt-

tipped dissector and the other end is curretted.

Use:

In lacrimal sac surgery.



Optic nerve guide (enucleation spoon)

It is a spoon-shaped instrument with a central

cleavage. ***Use: To engage the optic nerve during***

enucleation.



Evisceration curette

It consists of an oval or rounded shallow cup with blunt margins attached to a stout handle.

Use:

To curette out the intraocular contents during evisceration operation



Lid clamp or entropion clamp

Advantage over lid spatula: It is a self-retaining

instrument and does not need an assistant to hold.

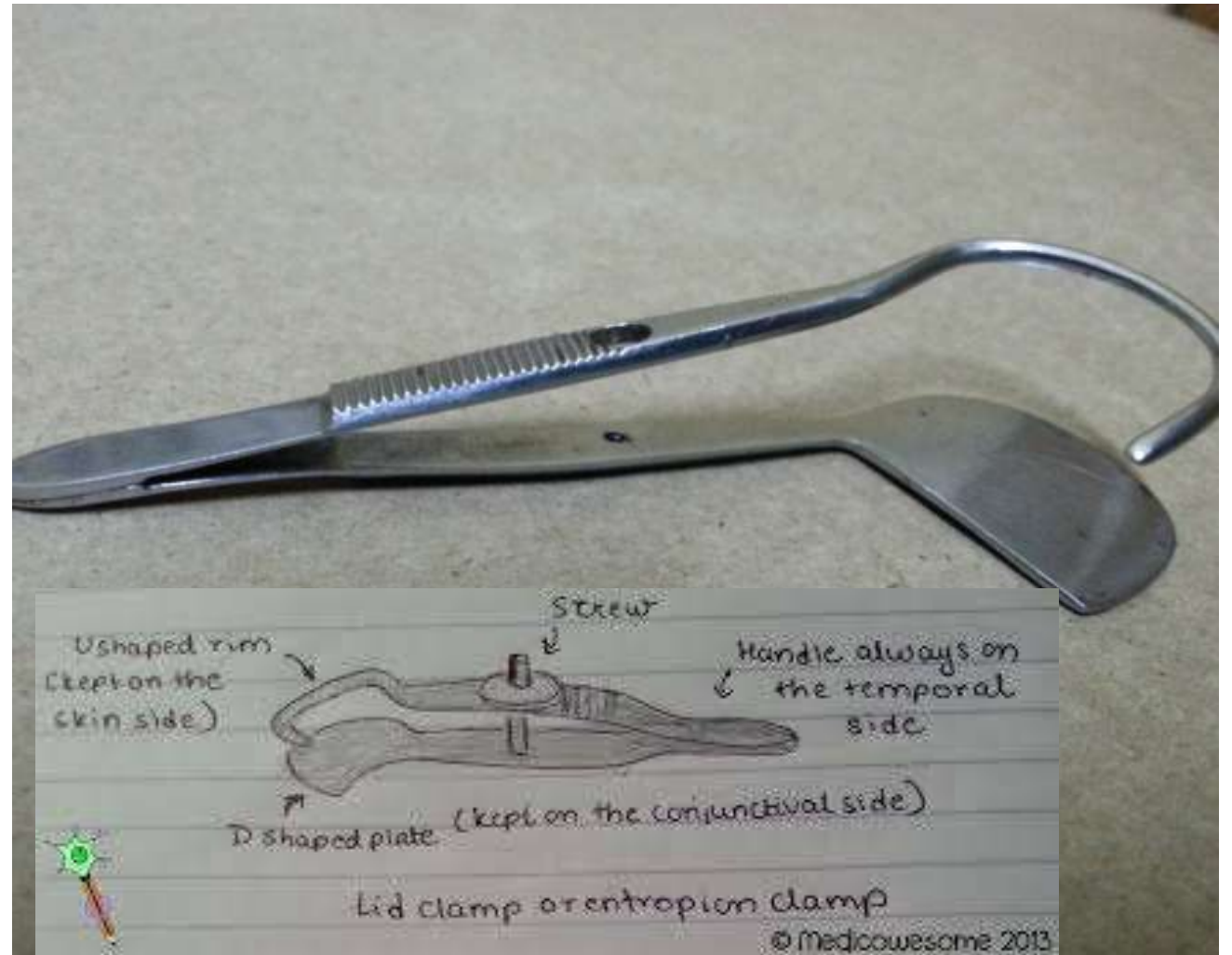
Disadvantages: (i) Operative field is less. (ii) Pressure

necrosis can occur if fitted tightly. Uses: It is used in

lid surgery e.g., entropion, and ectropion corrections.

It protects the eyeball, supports the lid tissue and

provides haemostasis during surgery.



Chalazion clamp

It consists of two limbs like forceps, which can be clamped with the help of a screw. The tip of one limb is flattened in the form of round disc while the tip of the other arm has a small circular ring. Usually the flat disc is applied on the skin side and ring on the conjunctival side of the chalazion.

Uses: To fix the chalazion and achieve haemostasis during incision and curettage.



Muscle (strabismus) hook

It is similar

to the lens expressor in appearance but has a blunt

guarding knob at the end to prevent muscle slippage.

The plane of the handle is the same as that of the

curvature of the hook.

Uses: (i) It is used to engage

the extraocular muscles during surgery for squint, enucleation, and retinal detachment.

(ii) In the

absence of lens expressor, it may be used in its place.



Lens expressor (hook)

It is a flat metal

handle with a rounded curve at one end. Tip of the curve is knobbed. The plane of the handle is at right angle to the curvature of the hook. **Uses: (i) To apply**

pressure on the limbus at the 6 O'clock position during

the delivery of lens in intracapsular cataract extraction

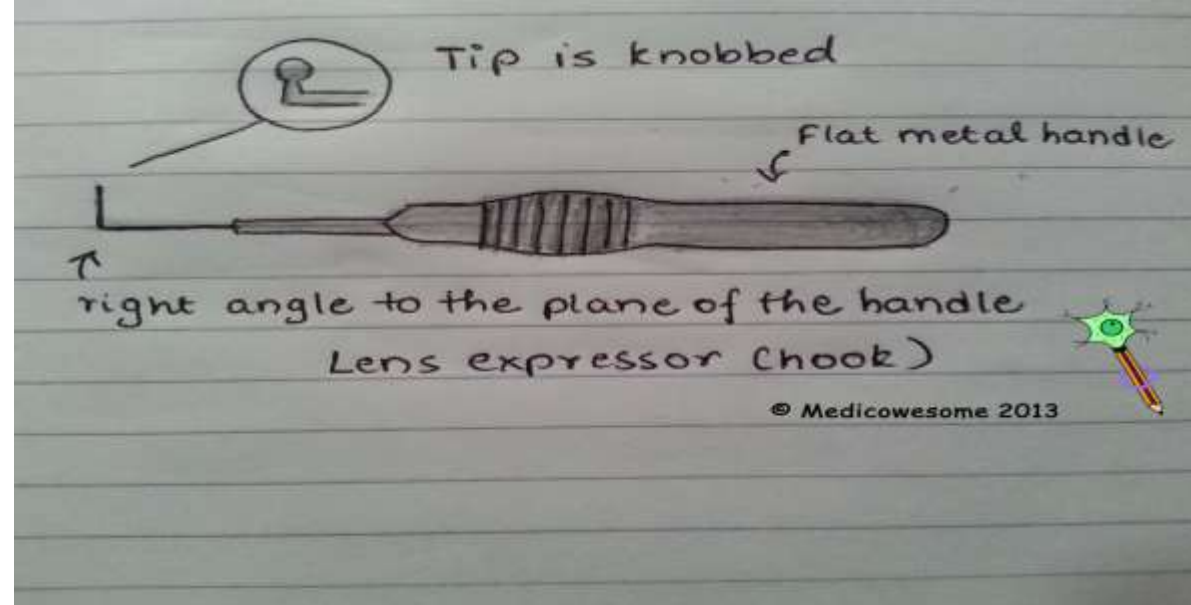
with Smith's (tumbling) and capsule forceps

techniques. (ii) To express the nucleus in

extracapsular cataract extraction. (iii) It can also be

used as muscle hook if the latter is not available. (v)

Also used along with wire vectis to extract out the dislocated len



Ptosis clamp

It is like forceps with Jshaped ends having internal serrations. The clamp has a locking mechanism.

Use:

To hold levator palpebrae superioris muscle during ptosis surgery.



Corneal trephine



Trephine blade



Evisceration stand

To keep eye ball after evisceration



. *Self-retaining lacrimal wound (Muller's) retractor*

It is made up of two limbs with

three curved pins on each for engaging the edges of

the skin incision. The limbs are kept in a retracted

position with the help of a fixing screw.

Uses: It is

used to retract the skin during surgery on the lacrimal

sac (e.g., DCT or DCR).



Kelman-McPherson forceps

These

are fine forceps with bent limbs. **Uses: (i) To hold the**

superior haptic of IOL during its placement.

(ii) To

tear off the anterior capsular flap in ECCE.

(iii) Can be

used for suture tying.



Maddox rod



Injector



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