Here presented are various instruments used in ophthalmic surgeries and procedure along with their chief uses.
INSTRUMENTS USED IN EXTRACAPSULAR CATARACT EXTRACTION

Barraquer Wire Speculum

It is used to keep the orbital fissure open during surgery.

Another instrument called Eye speculum with screw is also used to keep orbital fissure opened during surgery.

Bard Parker Knife

This is used to cut or give incision in and uses a disposable blade with it.

No. 11 blade
**Corneal scissors**

It is used for giving full thickness corneal incision.

**Corneal Forceps**

It’s a toothed forceps used for grasping cornea.
**Cystotome Needle**

This needle is designed with for easy manipulation in the anterior chamber. The sharp bent tip is used to tear the anterior capsule and initiate the capsulorrhexis.

**Simcoe Irrigation-aspiration Cannula**

This instrument is used to remove any cortical material left after phacoemulsification. It has two ports: one for irrigation to maintain the anterior chamber and the other for aspiration. It can also be used to remove viscoelastic material at the end of the surgery.
Sinskey Hooks
Straight and bent. The hook is used to dial the haptic into the capsular bag.

Titanium Needle Holder
This is for fine needle such as 10/0 nylon used in corneal graft or extracapsular cataract extraction.
Suture Tying Forceps

It is a plain forceps used for tying suture.

INSTRUMENTS FOR PHACOEMULSIFICATION

Disposable Keratome

This instrument is designed for clear corneal phacoemulsification. The width of the wound created will allow the entry of the phaco tip without it being too narrow or too wide.
Utrata Forceps

This forceps has bent sharp tips. It can be used instead of cystotome needle for capsulorrhexis. Alternatively, it can be used to pick up the anterior capsular flap created by the cystotome needle to complete the capsulorrhexis.

Phacoemulsification Probe

The phaco needle is used to emulsify the nucleus. The sleeve is placed over the needle during phacoemulsification. The sleeve is incompressible and serves as an insulator. Water which flows between the sleeve and the needle acts as a coolant and avoids burnt to the cornea.


**Nucleus Rotator**

The instrument is one of the many types of nucleus rotator. It can also be used to divide the nucleus with the help of the phaco tip.

![Nucleus Rotator Image](image1)

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![Simcoe Irrigation-aspiration Cannula Image](image2)
Wire Vectis
It is used to remove lens in ICCE.

Von Grafies Knife
It is used to give corneal incision in ICCE.

INSTRUMENTS FOR CHL AzION SURGERY

Chalazion Clamp
The clamp stops bleeding and provides a rigid surface against which the cyst can be incised.
Curettes of Various Sizes

Following the incision of the chalazion with No.11 Bard-Parker blade, the lipogranulomatous material of the chalazion is scooped out with the curette.

PROBING AND SYRINGING

Nettleship's Punctum Dilator

It is a cylindrical corrugated handle with conical pointed tip to dilate the punctum ad canaliculus during syringing, probing and DCR operation.
Cannula for Irrigating Lacrimal Apparatus

It is used for syringing the lacrimal passages.

Lacrimal Probes

During DCR, it helps to identify the exact location of the lacrimal fundus and facilitate dissection of the lacrimal sac.
INSTRUMENTS USED IN DACRYOCYSTORHINOSTOMY

Periosteum Elevator
This instrument has a sharp edge which is used to cut the periosteum and peel it to expose the lacrimal and ethmoid bone.

Bone Punch
This instrument is used to enlarge the osteotomy and it comes in different sizes and can be up-biting or down-biting. The blunt tip is placed against the nasal mucosa and rotated, dissecting the nasal mucosa from the underlying bone. In so doing, it allows the cutting edge to slip behind the bone without damaging the nasal mucosa.
Werb's Scissors
The angled tips allow cutting of the lacrimal sac to form flaps. It is also useful for cutting the nasal mucosa to create anterior and posterior flaps.

Instruments for Lid Surgery

Eye Guard
This is used to protect the globe when making a full thickness eyelid incision. It is most commonly used in Weiss's procedure in the correction of entropion. The guard is placed between the globe and the lower lid and a no. 15 blade is used to make a full thickness horizontal lid incision.
Snellen Entropion Clamp
It is used to guard the globe when making a full thickness eyelid incision. It has the added advantage of controlling haemorrhage when compared with the eye guard above.

Desmarre's Lid Retractor
It is used primarily for keeping the eyelid especially the upper lid everted. In the upper lid, it is used for the posterior approach in ptosis repair and mullectomy for upper lid retraction. In the lower lid, it can be used to keep the lid everted when performing fat excision or repair of lower lid retraction in thyroid eye disease.

Instruments for Ptosis

Berke Ptosis Clamp
This instrument is designed to clamp the levator to secure haemostasis during anterior levator resection.
Instruments for Strabismus Surgery

**Moorfields Forceps**
The grooves at the tip are designed for grasping the slippery conjunctival surface with minimal trauma.

![Moorfields Forceps Image]

**Westcott's Scissors**
The curved and blunt tips allows easy dissection of the Tenon's capsule from the sclera with little risk of perforating the scleral wall.

![Westcott's Scissors Image]

**Squint Hook (Muscle Hook)**
It is used to grasp the muscles or may also used as lens expressor hook.

![Squint Hook Image]
Caliper With Pointed Tips (Castroviejo Caliper)
The pointed tips are useful for making imprints on the sclera. It is used to take measurement during squint, ptosis and retinal detachment etc.

Curved Scissors & Straight Scissors
These are used for cutting conjunctiva and sutures.
**Straight Vannas Scissors and Curved Vanna Scissors**
These are fine delicate scissors with sharp edges. These are used for cutting vitreous.

**De Wecker's Scissors**
these are fine scissors with small blades directed at 90° to the arms. It is used for iridectomy for cutting a prolapsed formed vitreous.
Colibri Forcep
The tooth at the tip is ideal for holding the corneal or scleral edge when passing a suture. It can also be used for gasping iris tissue and for suture tying.

Kelman Mcpherson Forceps
These forceps may be angle or straight. The tip has a flat platform designed for tying fine suture. It is commonly used in corneal graft and during extracapsular cataract extraction.
Silcocks Needle Holder
This needle holder also has a locking mechanism to secure the needle during suturing.

Iris Repositor
It is a delicate, flat, metallic straight or bent blade with blunt edges. It is used to reposit the iris in the anterior chamber in any intraocular surgery.

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