

1.8 Surgical instruments

Video OSPE 41

Drugs used in surgery

- **Mydriatics:** To dilate pupil for surgery like cataract extraction and retinal surgery. These are parasympatholytic to paralyze sphincter pupillae muscle (**cyclopentolate, tropicamide**) and sympathomimetic to dilate dilator pupillae muscle (**phenylephrine**)
- **Dyes:** To stain structures for surgery. **Methylene blue** is used to stain anterior capsule for cataract surgery and to stain retinal surface membranes and internal limiting membrane for macular hole surgery
- **Visco elastics:** These are **Hydroxy Methylcellulose (HPMC)** and **Sodium Hyaluronate**. These are used to keep eye formed. They are used for all anterior segment surgeries particularly cataract surgery.

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Operating microscope & Phaco machines

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Video OSPE 42

Operating microscope

- Operating microscope are used for most eye operations
- They have eye pieces, light system, lens system and foot pedal to control various functions



Vv

Video OSPE 43

Phacoemulsification machines

- Phacoemulsification (Phaco) machine is used to break lens in to small pieces and take them out of eye
- It consist of main unit (Fig 1), hand piece (Fig 2) and foot pedal (Fig 3)



Figure 2



Figure 1



Figure 3

Cataract / Trabeculectomy set

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Video OSPE 44

Cataract / Trabeculectomy set

1. Lid speculum: To keep eye lids open
2. Knives: 3.2, 1mm, crescent, number 15 & number 11
3. Scissors: For cutting structures
4. Forceps
 1. Tooth forceps: Mainly to hold eye during surgery
 2. Plain forceps: For use inside eye
5. Needle holder
6. Long instruments
 1. Dialer: To dial IOL in eye
 2. Iris repositor
 3. Wire Vectus
 4. Handle for number 15 & number 11 blade
7. Simcoe cannula: It has two hole. One for irrigation and other for aspiration.

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Cataract / Trabeculectomy set



1- Lid speculum

No 15 & 11 knife



Crescent knife



2

1mm side port knife



3.2 phaco knife



Cataract / Trabeculectomy set

Spring scissors



3



Spring scissors

Needle holder



4

Tooth forceps



5



Spring scissors

Cataract / Trabeculectomy set



6



Sinski hook/ Len dialer

Iris reposer

Wire Vectus

No 15 blade handle

7



Simcoe cannula OR
Irrigation & aspiration
cannula

Lid & Chalazion sets

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Video OSPE 45

Lid set

- Scissors
- Knives
- Lid guard
- Needle holder
- Cautery machine

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Video OSPE 46

Chalazion set



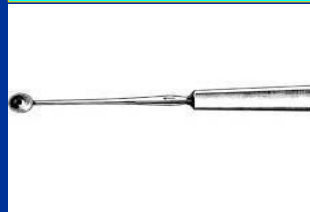
**Step 1: Apply
chalazion clamp**



**Step 2: Cut with
Number 11 blade**

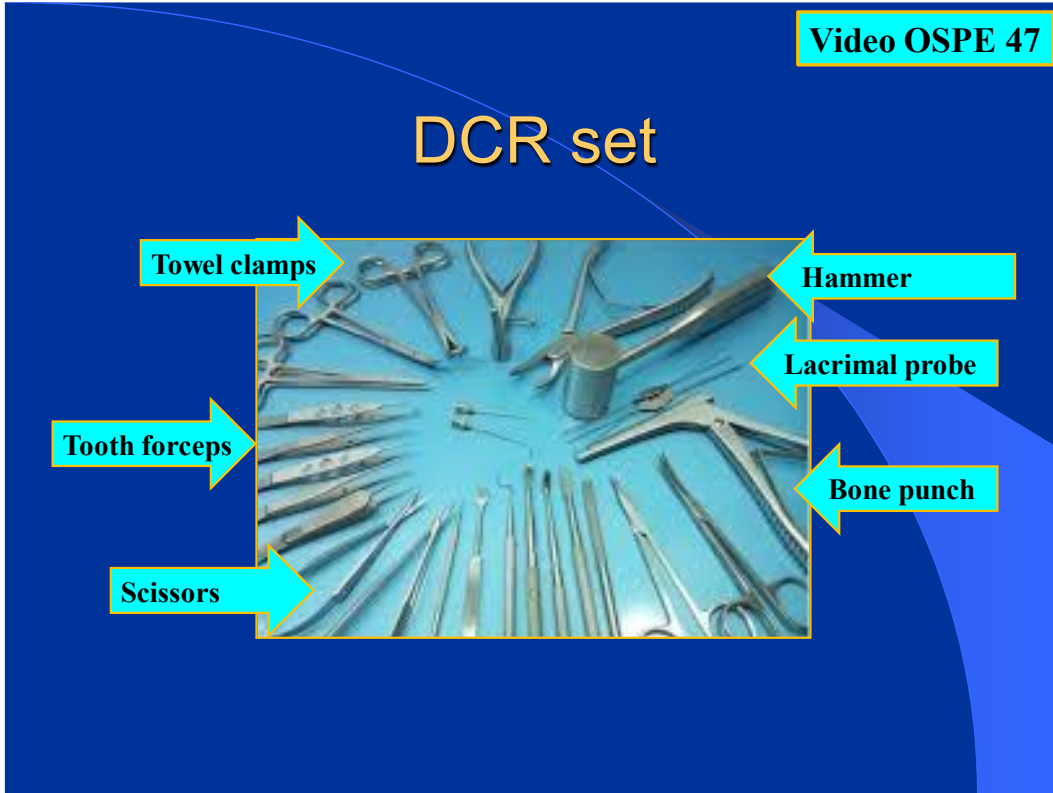


**Step 3: Cut with
Number 11 blade**



DCR (Dacryocystorhinostomy) set

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