

1.4 Outpatient pharmacology

There are two types of drugs used in ophthalmology; diagnostic and therapeutic.

Diagnostic drugs are used in outpatients and operation theatre.

- **Mydriatics** are used to dilate pupil. All mydriatics do not cause cycloplegia. Dialtion is mostly done for postrior segment examination.
- **Cycloplegics** are drugs used to paralyse ciliary muscle for short time. All cycloplegics dilate pupil as well. Cycloplegics ae mostly used to do refraction in children.
- **Dyes** are commonly used in eye outpatients.
 - Fulurescein: Most common dye used is fluorescein which is used for checking intraocular pressure and staining cornea to se corneal lesions like abrasions, ulcers and punctate keratopathy. Floresein is also used for doing fundus fluorescein angiography (FFA) to see blokage and leakage in retinal vessels.
 - Methyline blue: This is another common dye mostly used to stain anterior capsule of lens for capsulotomy.
- **Local anesthetics** are used mostly to anesthetise cornea for checking intraocular pressure. They are also used for topical procedure like foreign bdy removal, scraping and cataract extraction under topical anesthesia.

DIAGNOSTIC MEDICATIONS:

Mydriatics
Cycloplegics
Dyes
Local anesthetics

Mydriatics: Primarily for dilating pupil
Cycloplegics: Primarily for paralyzing ciliary muscle

All Cycloplegics are mydriatics
All Mydriatics are not cycloplegics
(phenylephrine)

THERAPEUTIC MEDICATIONS:

Lubricants
Anti Inflammatory
 Steroids
 Non Steroidal Anti Inflammatory
Anti Allergic
Anti Glaucoma
Anti microbials



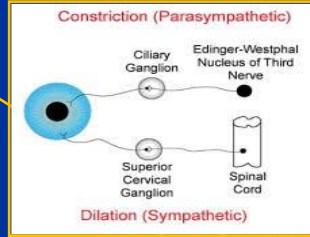
OPD/ DIAGNOSTIC MEDICATIONS

- **MYDRIATICS** (to dilate pupil)

- **CYCLOPLEGICS**

- **DYES**

- **TOPICAL ANAESTHETICS**



- **SYMPATHOMIMETICS**

- PHENYLEPHRINE
- EPINEPHRINE

- **PARASYMPATHOLYTICS**

- ATROPINE
- TROPICAMIDE
- CYCLOPENTOLATE
- HOMATROPINE
- SCOPOLAMINE

Uses

Examination of fundus
Intra ocular Surgery
Investigations like FFA, OCT

Side effects

Dilated pupil so inform patient
Blurry vision so inform patient
Unable to read so inform patient
Photophobia so inform patient

OPD/DIAGNOSTIC MEDICATIONS

- **MYDRIATICS**

- **CYCLOPLEGICS**

- **DYES**

- **TOPICAL ANAESTHETICS**



- The ability of drug to temporarily paralyze ciliary muscle is **CYCLOPLEGIA**
- These drugs **PREVENT OR LIMIT ACCOMMODATION & CAUSE MYDRIASIS**

•LONG ACTING

ATROPINE.....1--- 2WKS, 7—10 DAYS
HOMATROPINE.....1--- 3 DAYS
SCOPOLAMINE.....4 ---7 DAYS

•SHORT ACTING

TROPICAMIDE.....4---6 HOURS
CYCLOPENTOLATE...12 ---24 HOURS

Uses

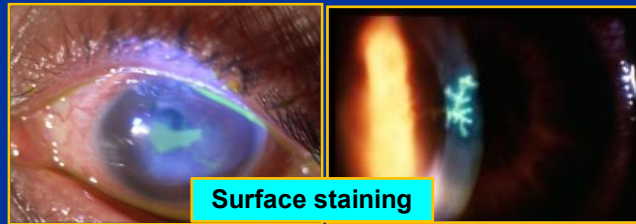
For refraction in children
For refractive laser examination
For treating pain in uveitis
Dilating pupil intraocular surgery

Side effects

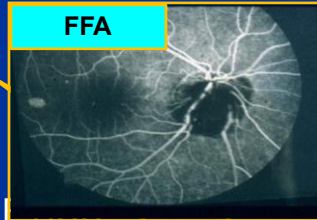
Mild temperature, Disorientation
Dilated pupil so inform patient
Blurry vision so inform patient
Unable to read so inform patient
Photophobia so inform patient

OPD/DIAGNOSTIC MEDICATIONS

- MYDRIATICS
- CYCLOPLEGICS
- DYES
- TOPICAL ANAESTHETICS



Surface staining



FFA



IOP

Uses

Fluorescein dye for
 Staining lesions on surface
 Staining defects in corneal epithelium
 Contact lens fitting
 IOP
 FFA
 Staining structures for surgery
Methylene blue for
 Capsular staining during cataract surgery

- FLUORESCEIN
- METHYLENE BLUE
- ROSE BENGAL
- ALCIAN BLUE
- INDOCYANINE GREEN



Capsular staining

DIAGNOSTIC MEDICATIONS

- MYDRIATICS
- CYCLOPLEGICS
- DYES
- TOPICAL ANAESTHETICS

- TETRACAIN (PONTOCAIN 0.5%)
- BENOXINATE (DORSACAIN 0.4%)
- PROPARACAIN (OPHTHAIN 0.5%)
- PROCAINE (NOVOCAIN)
- LIDOCAIN (XYLOCAIN)
- BUPIVACAIN (MARACAIN)



Uses

- Checking IOP
- For intravitreal injections
- Local procedures like FB removal
- Cataract and other surgery

Side effects

- Poor healing
- Foreign body can enter in anesthetized eye so keep it covered