

ANTERIOR UVIETIS

SIGNS AND SYMPTOMS

00:00:13



WHAT IS ANTERIOR UVEITIS?

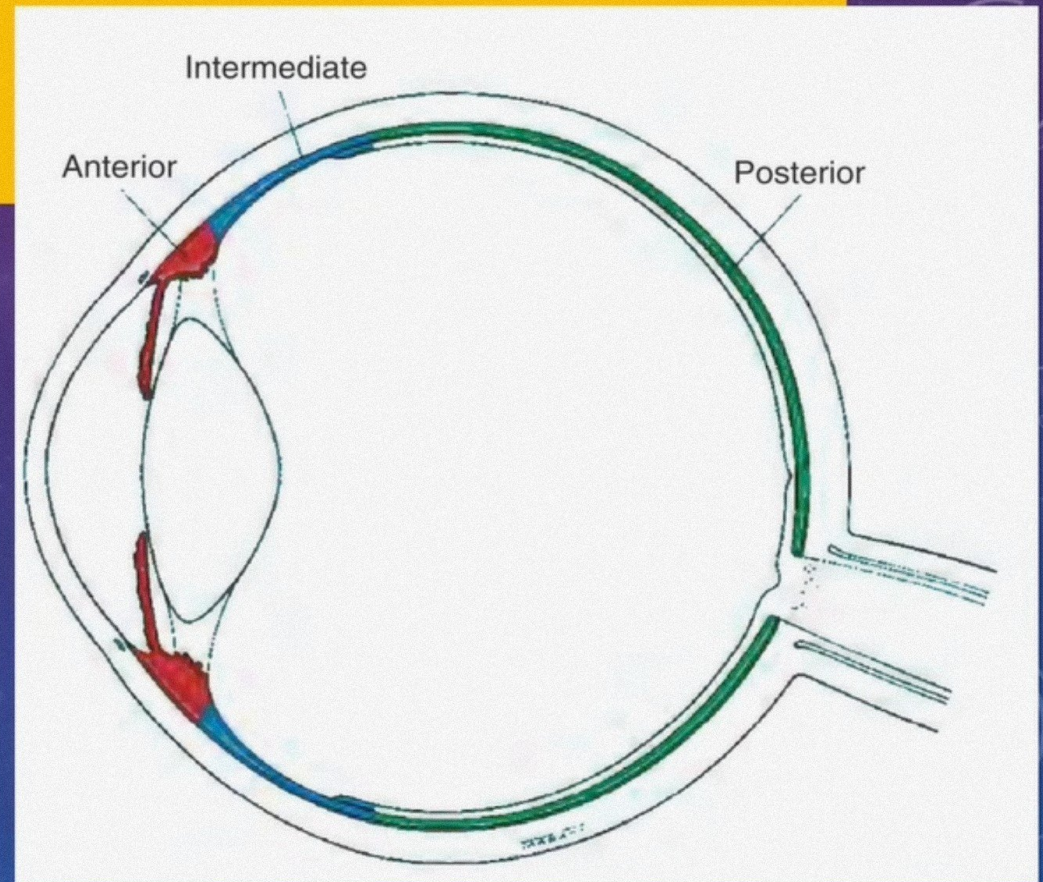
- Anterior uveitis is inflammation involving the anterior uveal tract – the iris and the anterior part (pars plicata) of the ciliary body

00:00:20



CLASSIFICATION

- IRITIS
- CYCLITIS
- IRIDOCYCLITIS



00:00:36



COMMON SYMPTOMS OF ANTERIOR UVEITIS

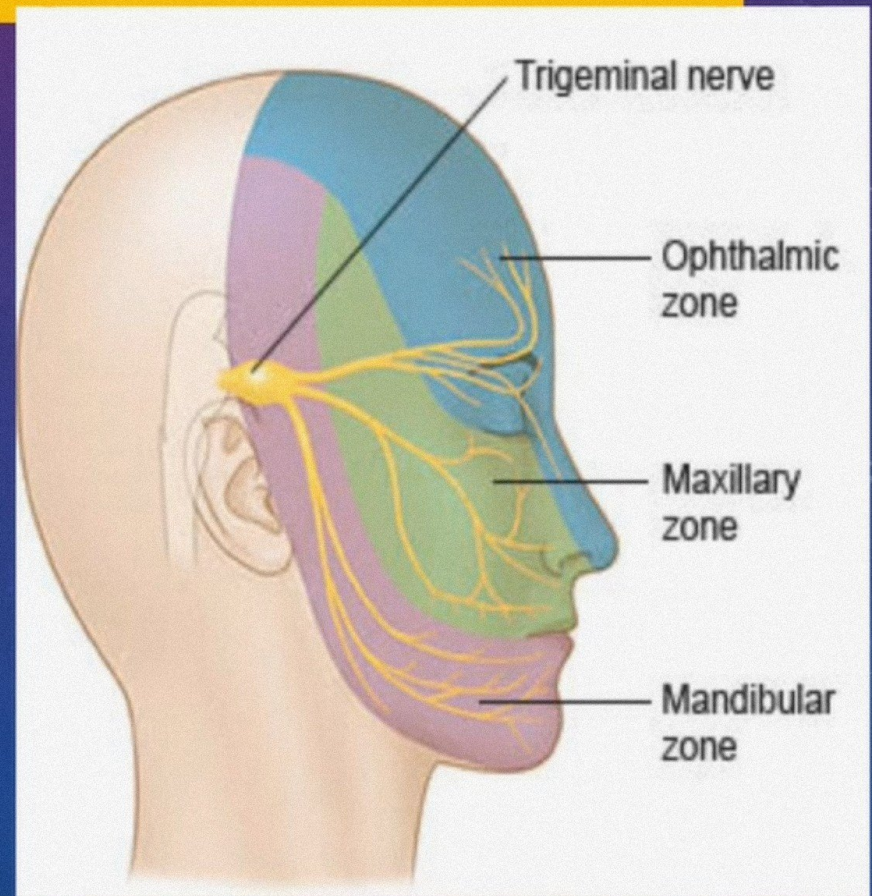
- Photophobia
- Blurred vision
- Pain
- Redness of eye
- Watery discharge

00:00:53



PAIN

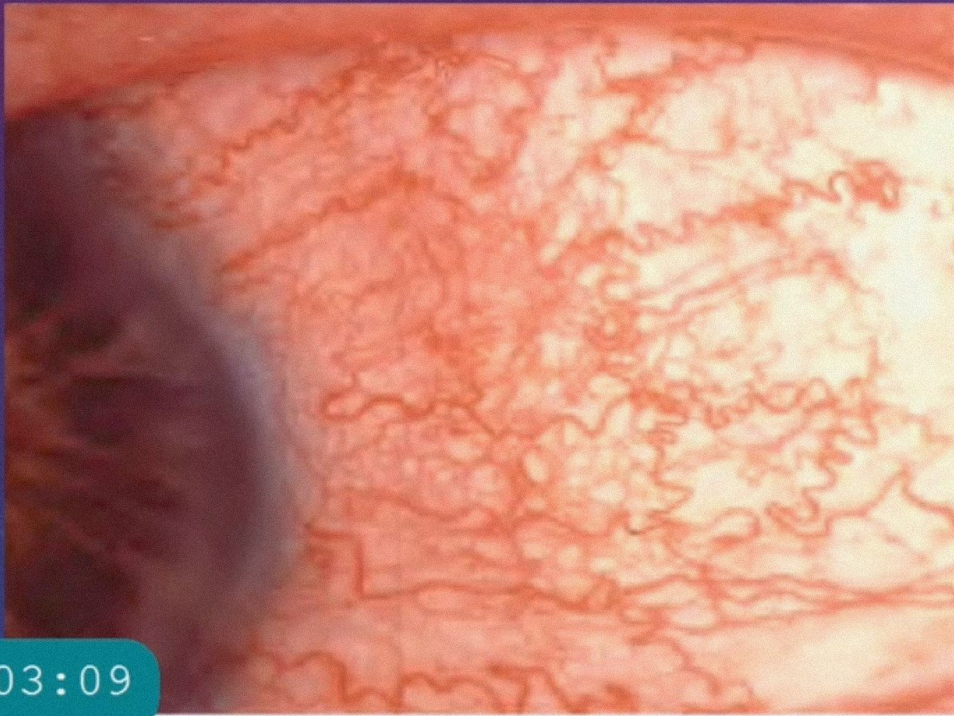
- Richly supplied with sensory nerves from the ophthalmic division of the trigeminal nerve,
- Pain, typically worse at night, is a prominent symptom of acute iritis.
- Severe neuralgic pain is felt here, but is also referred to other branches of the nerve,
- Forehead and scalp, to the cheeks and teeth.



00:01:55



CONGESTION/ CILIARY FLUSH/ CIRCUM CORNEAL CONGESTION



Active hyperaemia of anterior ciliary vessels due to the effect of toxins, histamine and histamine-like substances and axon reflex.

00:03:09



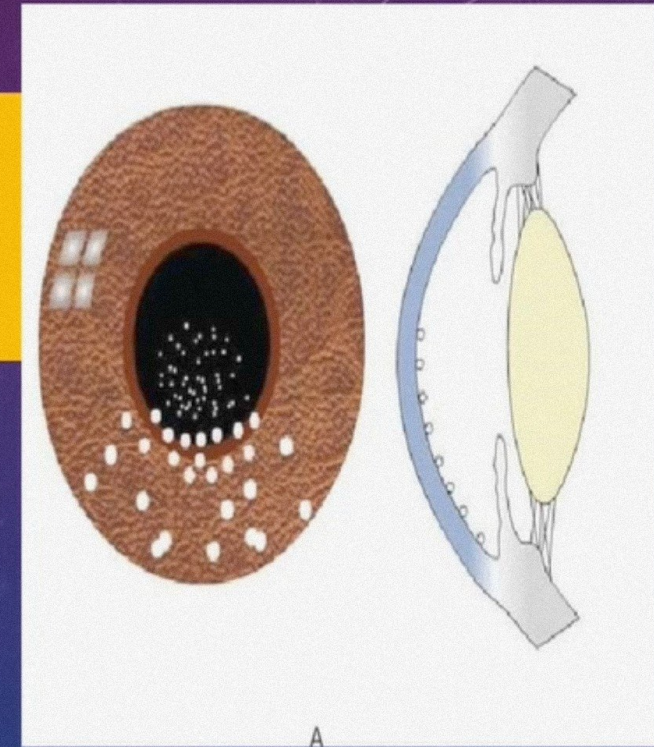
CHANGES IN CORNEA

00:04:01



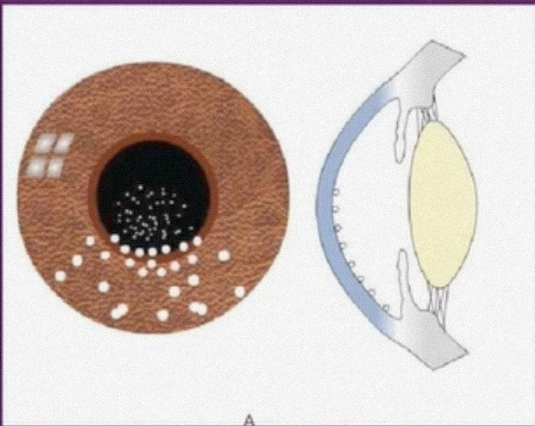
KERATIC PRECIPITATES

- The nutrition of the corneal endothelium becomes affected so that the cells become sticky and desquamate in places.
- The exudates tend to stick there, forming **keratic precipitates**.
- Over a triangular area in the lower part of the cornea (arlit triangle), due to convection currents in the aqueous and gravitation of the particles towards the bottom of the anterior chamber.



00:04:32





Small and medium KPs (granular KPs).

- These are pathognomonic of non-granulomatous uveitis and are composed of lymphocytes.
- These small, discrete, dirty white KPs are arranged irregularly at the back of cornea.
- Small KPs may be hundreds in number and form the so called endothelial dusting.

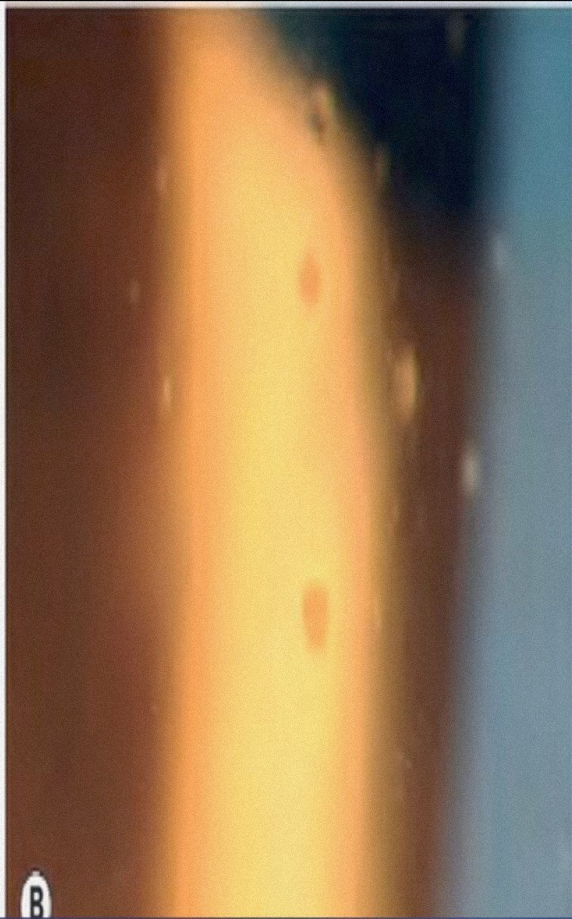
Mutton fat KPs

- These typically occur in granulomatous iridocyclitis and are composed of epithelioid cells and macrophages.
- They are large, thick, fluffy, lardaceous KPs, having a greasy or waxy appearance.
- Mutton fat KPs are usually a few (10 to 15) in number

OLD KPS

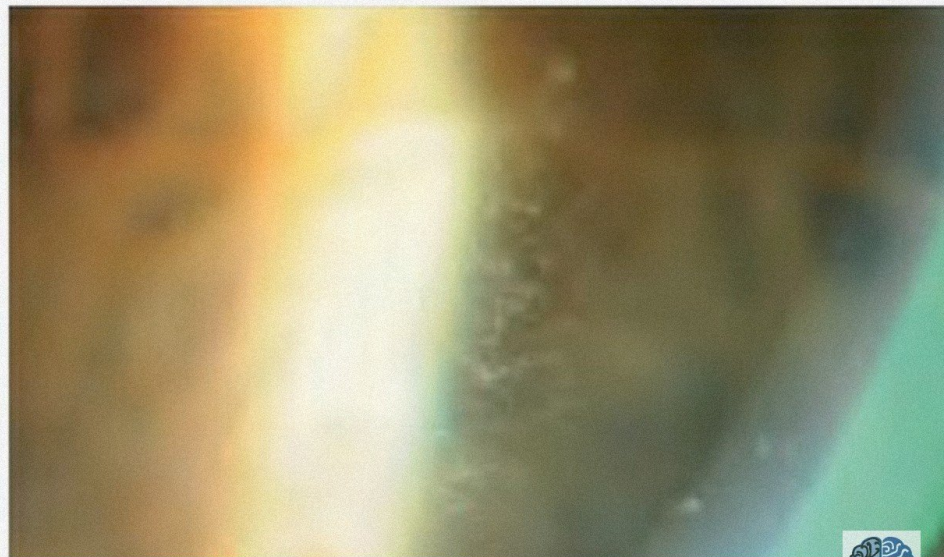
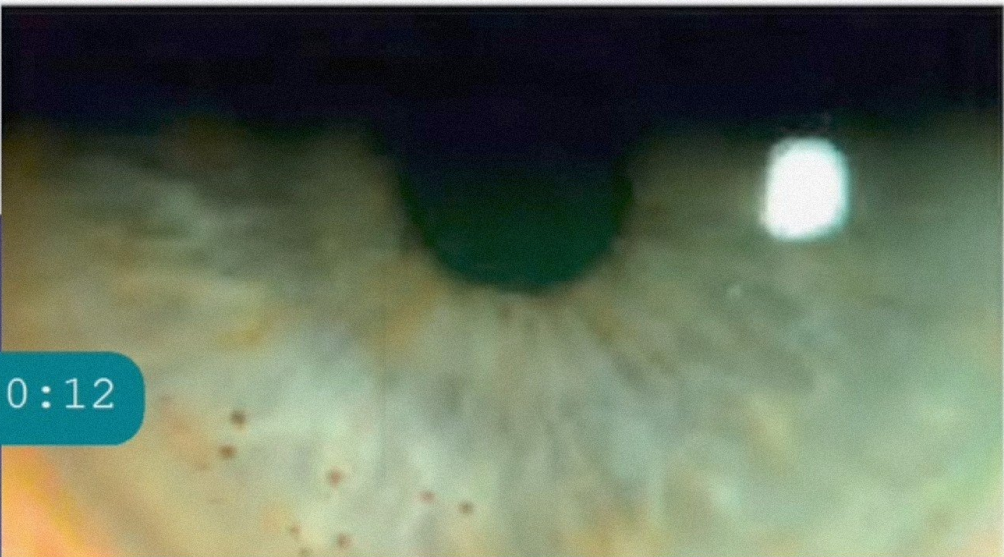
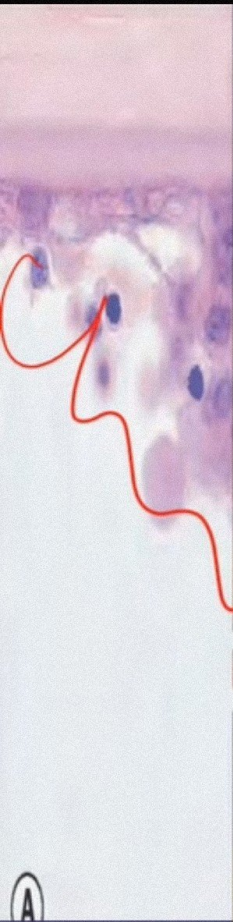
- Shrink, fade, become pigmented and irregular in shape (crenated margins).
- Old mutton fat KPs usually have a ground glass appearance due to hyalinization.





00:10:04





00:10:12



CHANGES IN AC

00:00:19



FLARES AND CELLS

- Albuminous exudates
- Aqueous becomes plasmoid containing leucocytes and minute flakes of coagulated protein, or even fibrinous networks in severe cases.
- Hazy, forming a milky 'flare' in the beam of the slit-lamp.



00:00:29



TABLE 3. The SUN* Working Group Grading Scheme for Anterior Chamber Cells

Grade	Cells in Field [†]
0	<1
0.5+	1–5
1+	6–15
2+	16–25
3+	26–50
4+	>50

Oblique slit-lamp beam, 1mm long and 1-mm wide, with maximal light intensity and magnification

00:01:35

* = Standardization of uveitis nomenclature.

[†] Field size is a 1 mm by 1 mm slit beam.



TABLE 4. The SUN* Working Group Grading Scheme for Anterior Chamber Flare

Grade	Description
0	None
1+	Faint
2+	Moderate (iris and lens details clear)
3+	Marked (iris and lens details hazy)
4+	Intense (fibrin or plastic aqueous)

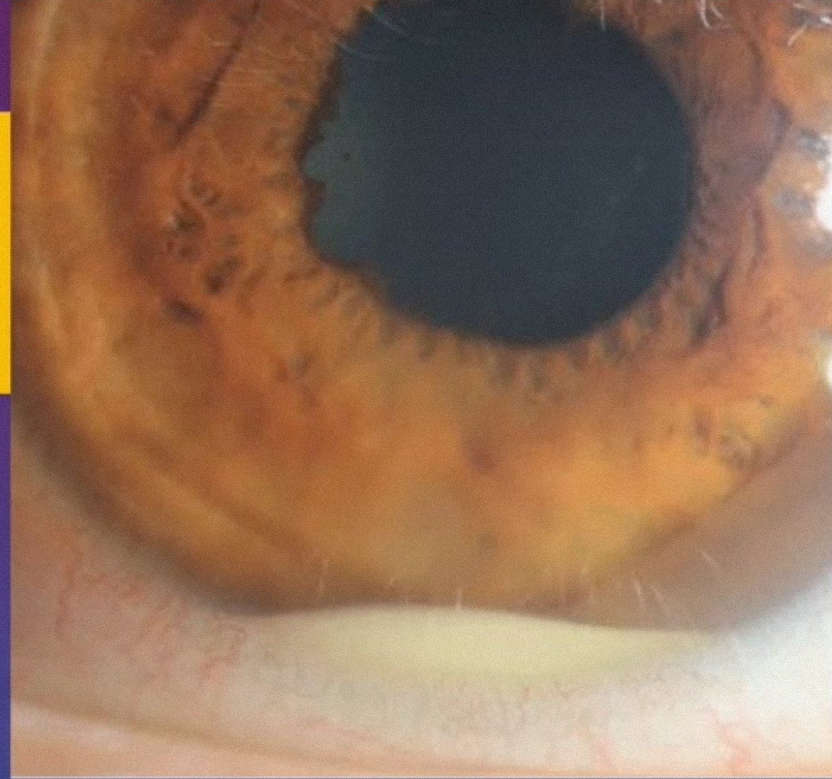
00:03:14 Cited from reference 12.

*SUN = Standardization of uveitis nomenclature.



HYPOPYON / HYPHEMA

- Polymorphonuclear leucocytes are poured out and sink to the bottom of the anterior chamber to form a hypopyon.
- Hyphaema, or blood in the anterior chamber is rare

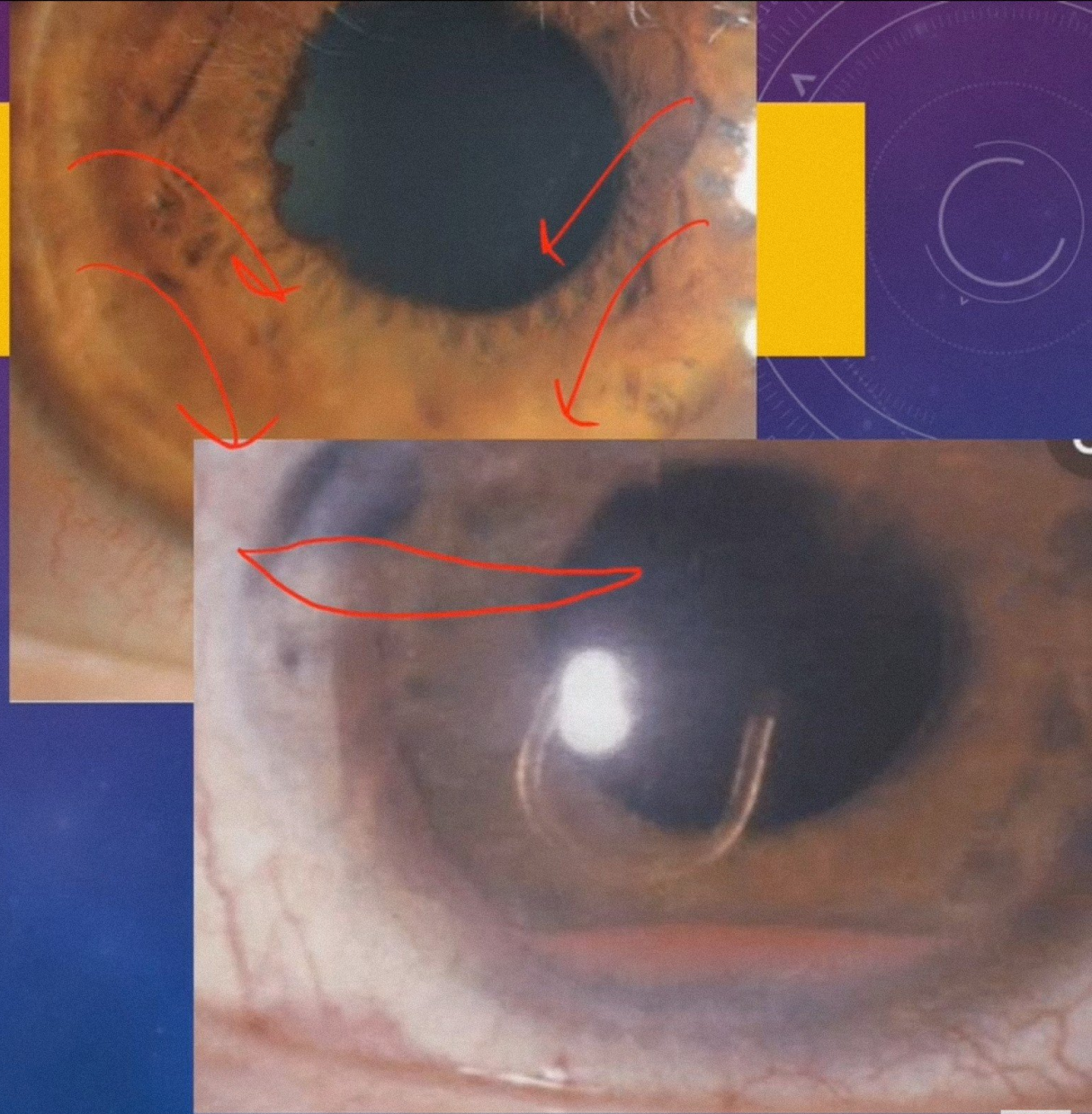


00:00:16



HYPOPYON / HYPHEMA

- Polymorphonuclear leucocytes are poured out and sink to the bottom of the anterior chamber to form a hypopyon.
- Hyphaema, or blood in the anterior chamber is rare



00:00:58



OTHER AC SIGNS

- CHANGE IN DEPTH :- synechiae formation
- CHANGE IN ANGLE OF ANTERIOR CHAMBER :- observed with gonioscopic examination. In active stage, cellular deposits and in chronic stage **peripheral anterior synechiae (PAS)** may be seen.

00:02:31



IRIS SIGNS

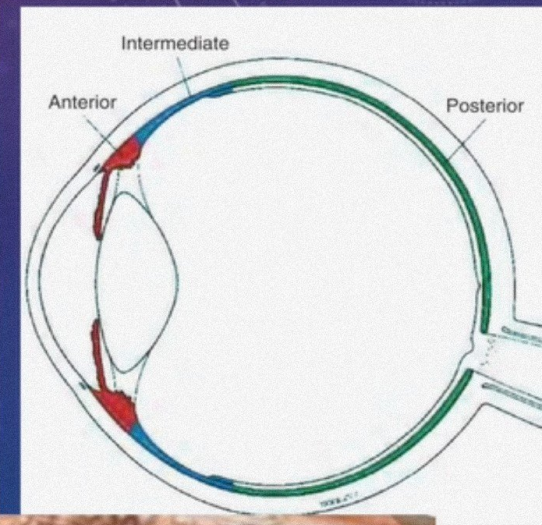
- LOSS OF PATTERN
- CHANGE IN COLOR
- IRIS NODULES
- POSTERIOR SYNECHIAE
- NEOVASCULARISATION

00:03:06



IRITIS

- Inflammation of the iris
- Dilatation of the blood vessels
- Exudation of a protein-rich fluid
- Pupil contraction (mechanically)
- Waterlogged iris, sluggish pupillary reaction



00:03:26



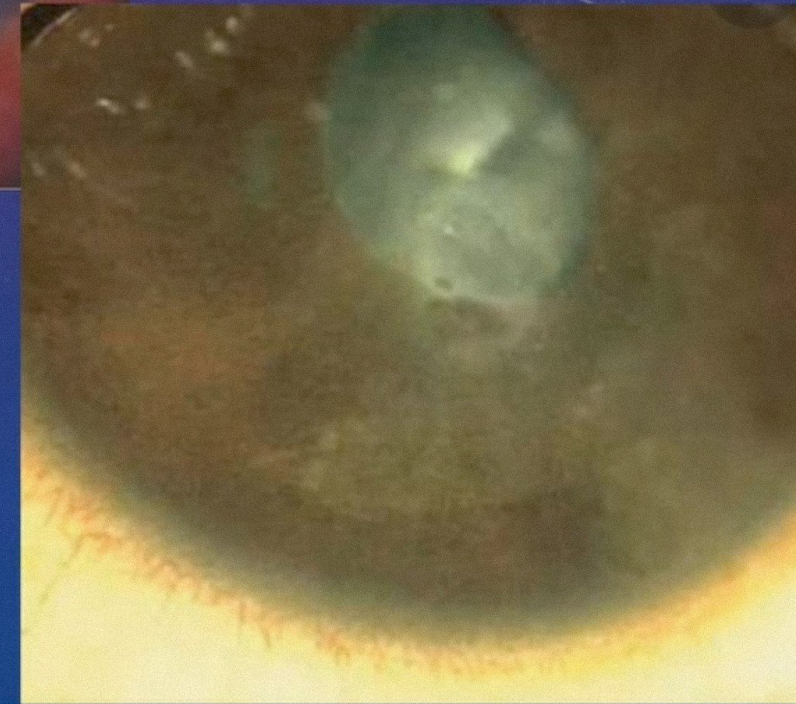
- The colour undergoes considerable change
 - blue irides → bluish or yellowish green
- brown irides → show less difference; greyish or yellowish brown.

00:04:30



PLASTIC IRITIS

- Exudates poured out by the iris and ciliary body also cover the surface of the iris as a thin film and spread into, and sometimes completely over, the pupillary area.

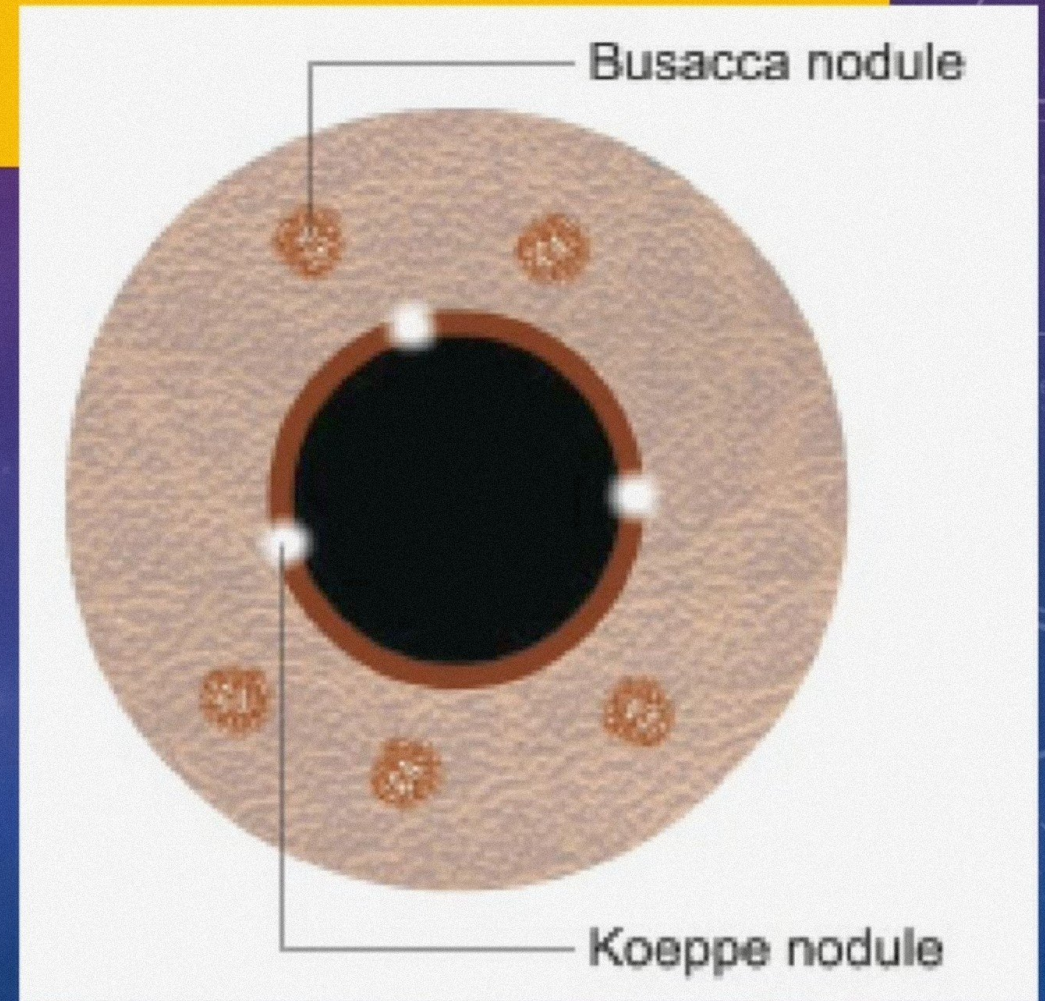


00:04:50



IRIS NODULES

- **Koeppe's nodules**:- are situated at the pupillary border and may initiate posterior synechia.
- **Busacca's nodules**:- situated near the collarette are large but less common than the Koeppe's nodules



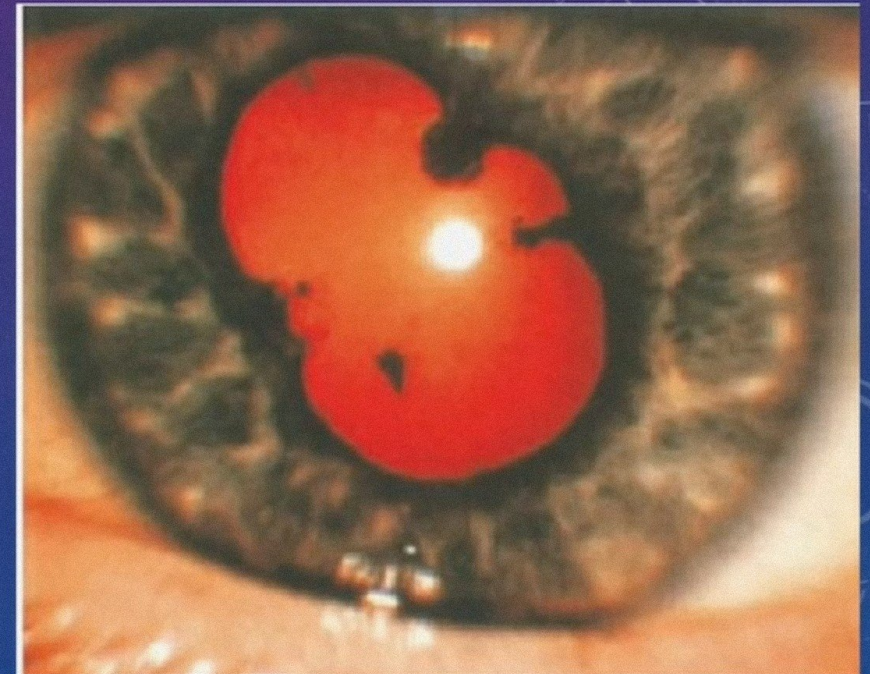
00:05:28



POSTERIOR SYNECHIAE

SIGN OF PRESENT OR PAST
IRITIS

- Iris sticks to the lens capsule because of the exudates and becomes fixed.
- Adhesions are converted into fibrous bands which the atropine is unable to rupture.
- Such firm adhesions of the pupillary margin to the lens capsule are called **synechiae**.



00:06:08



POSTERIOR SYNECHIAE

**SEGMENTAL
POSTERIOR
SYNECHIAE**

**ANNULAR
POSTERIOR
SYNECHIAE**

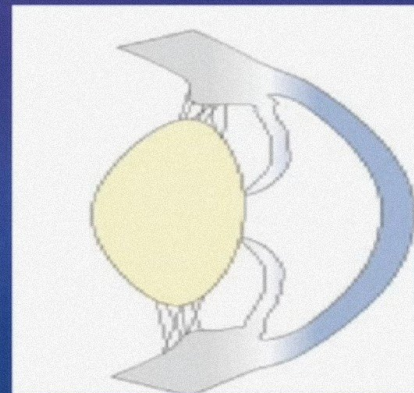
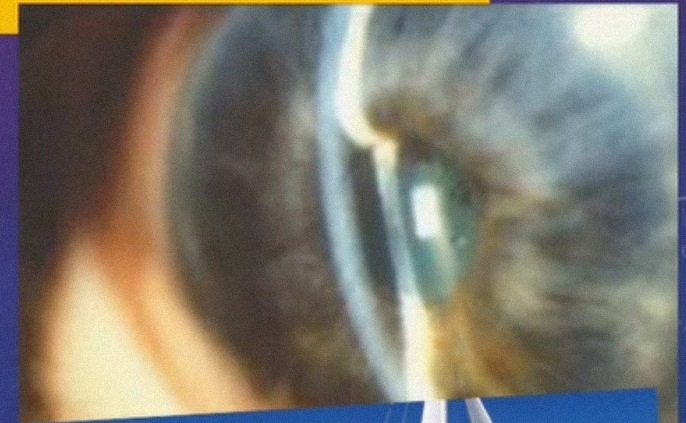
**• TOTAL
POSTERIOR
SYNECHIAE**

00:07:25



ANNULAR SYNECHIAE/ RING SYNECHIAE/ SECLUSION PUPILLAE

- Leads to a secondary angle closure glaucoma.
- The aqueous, unable to pass forwards into the anterior chamber, collects behind the iris, which becomes bowed forwards like a sail—a condition which is called peripheral anterior synechiae
- Raised IOP

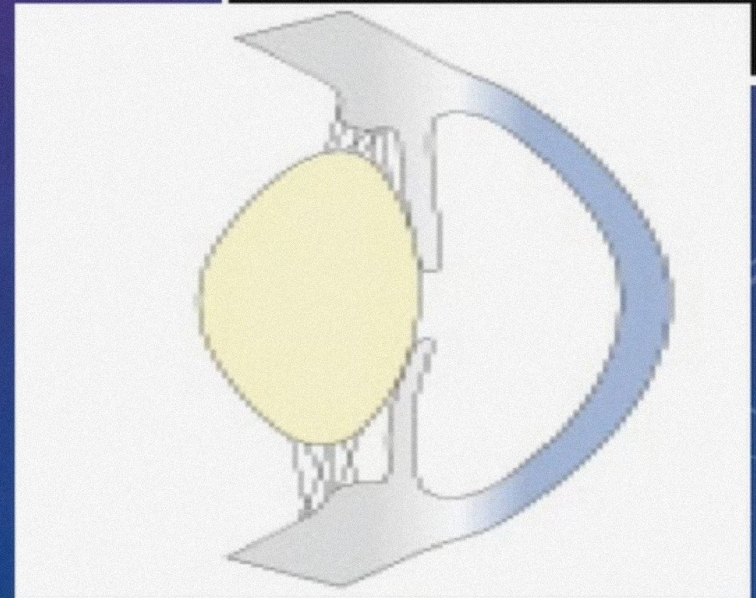
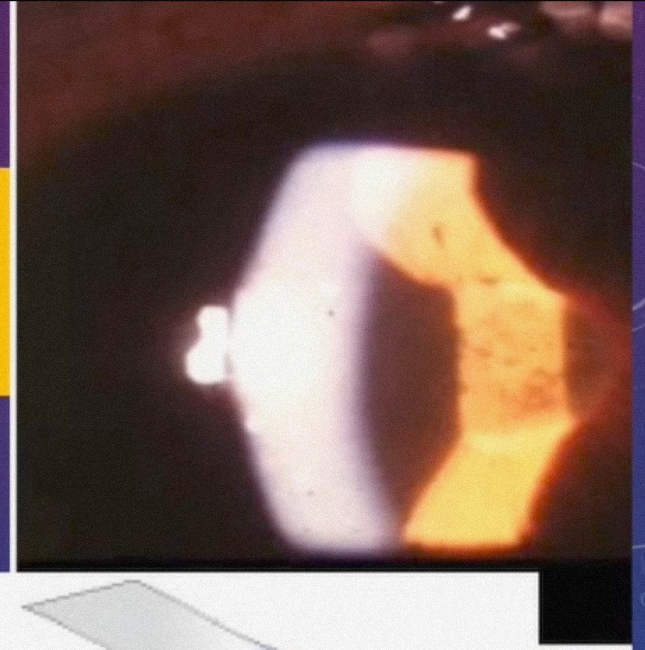


00:07:28



TOTAL POSTERIOR SYNECHIAE

- Cyclitis the posterior chamber also fills with exudates which may organize, tying down the iris to the lens capsule
- This causes retraction of the peripheral part of the iris, so that the anterior chamber becomes abnormally deep at the periphery, sometimes deeper than in the centre.

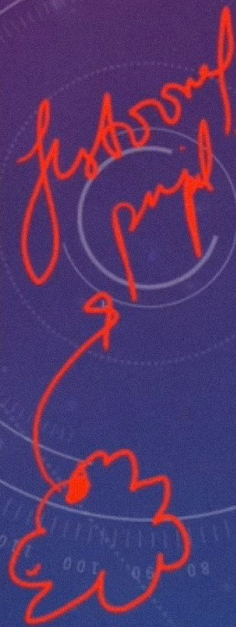


00:08:30



CHANGES IN PUPIL

- **NARROW PUPIL** :- It occurs in acute attack of iridocyclitis due to irritation of sphincter pupillae by toxins.
- **IRREGULAR PUPIL SHAPE** :- It results from segmental posterior synechiae formation.
- **ECTROPION PUPILLAE** (eversion of pupillary margin).
- **PUPILLARY REACTION** becomes sluggish due to oedema and hyperaemia of iris which hamper its movements.
- **OCCLUSIO PUPILLAE** organisation of the exudates across the entire pupillary



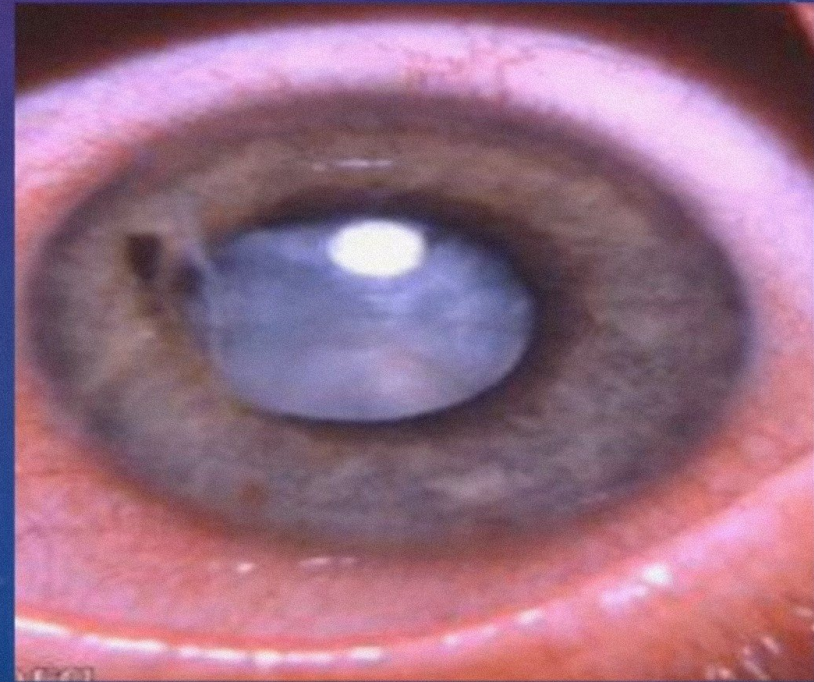
00:02:24



ECTROPION OF THE UVEAL PIGMENT



- Due to the contraction of organizing exudates upon the iris the pigment epithelium on its posterior surface may be pulled around the pupillary margin so that patches of pigment may be seen on the anterior surface of the iris.



00:02:44



IRREGULAR PUPIL SHAPE / FESTOONED PUPIL



00:03:28



WHY IS PUPILLARY REACTION SLUGGISH IN ANTERIOR UVEITIS?

- Large exudation and iris swelling
- Waterlogged swollen, muddy iris
- Reaction of sphincter to irritants released from exudates

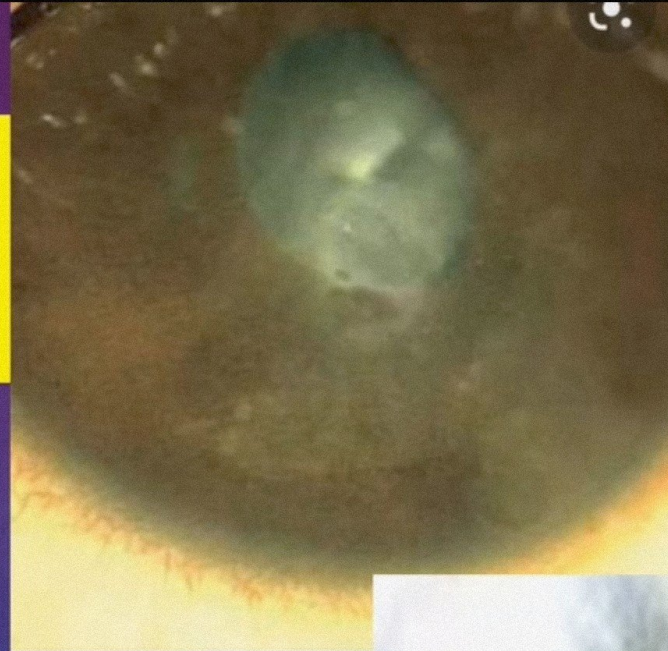


00:03:37



OCCLUSIO PUPILLAE

- When the exudates are extensive, it may organize across the entire pupillary area, which ultimately becomes filled by a film of opaque fibrous tissue—this condition is called a blocked pupil, or *occlusio pupillae*.



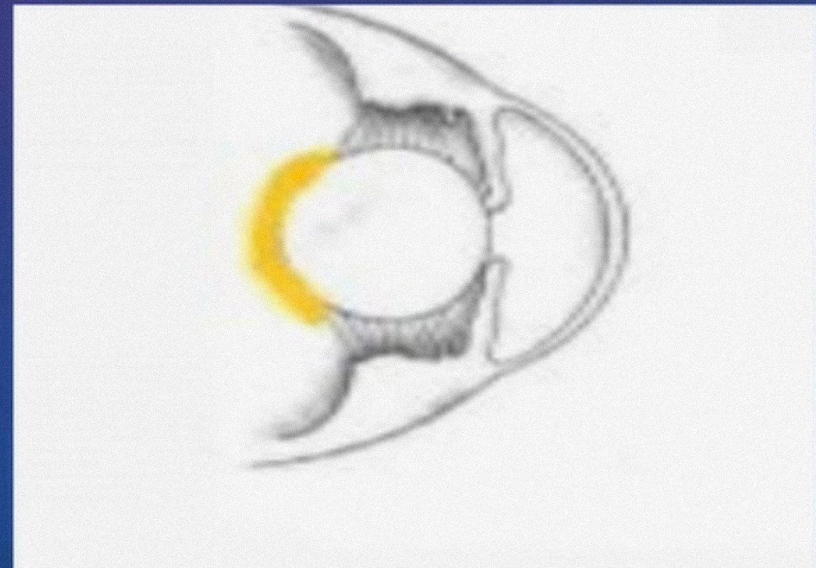
00:04:08



CHANGES IN LENS



- PIGMENT DISPERSAL ON LENS
- EXYDATES ON LENS
- COMPLICATED CATARACT (POSTERIOR SUBCAPSULAR CATARACT)
- CYCLITIC MEMBERANE



00:04:24



CHRONIC COMPLICATIONS / SEQUELAE

- Uvietis glaucoma
- Complicated cataract(polychromatic lustre)
- Cyclitic memberane
- Ciliary body shock
- Band Shaped keratopathy
- Pthisis bulbi

00:05:16

