

Uveitis

Dr. Daa' Albtoush

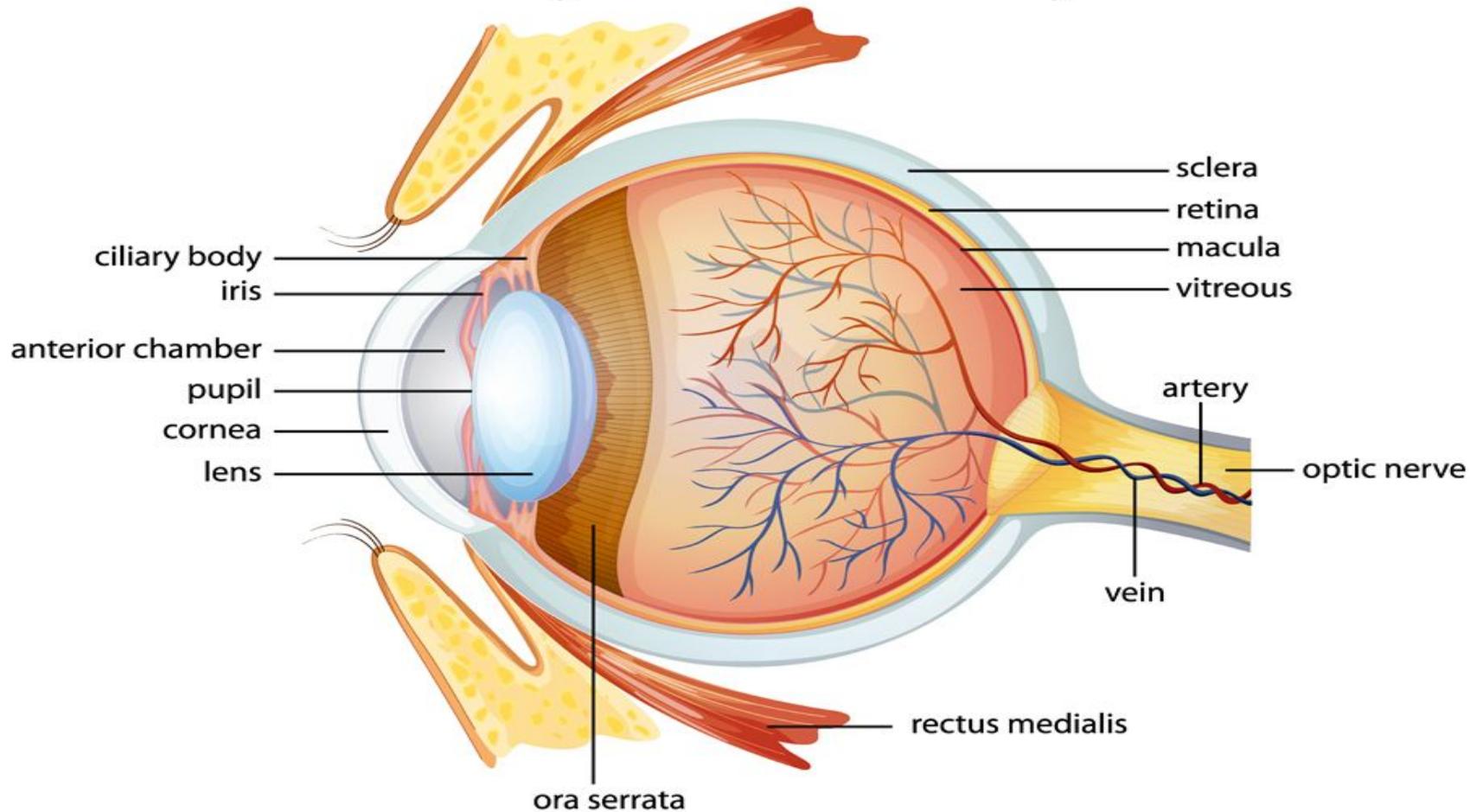
Presented by:

Abdullah Abu Khalaf

Emran Younis

Yousef Mahadin

Anatomy of the Human Eye



Introduction

Uveitis is inflammation of the uveal tract.

Uveal tract is composed of :

1. Iris
2. Ciliary body
3. Choroid

Uvea is sandwiched between retina and sclera so uveitis may be involved in the inflammatory process.

Classification

1. Anatomical
2. Etiological
3. Chronological

Anatomical classification

1. Anterior : Iris & anterior part of ciliary body
2. Intermediate : Posterior part of ciliary body & anterior part of choroid
3. Posterior : Choroid
4. Pan uveitis : all the three components .

Etiology

Either exogenous causes, e.g. trauma or surgery

Or

endogenous causes —→ 2ry to another local disease in eye.

—→ 2ry to systemic disease.

* 30-50% of cases are primary, but we have always to rule out secondary causes

Epidemiology

Incidence of uveitis is 15 : 100,000 people.

75% of them are anterior .

50% of patients with uveitis have an associated systemic disease .

Symptoms

1. Dull ocular pain: due to 5th cranial nerve irritation and ciliary muscle spasm.
2. Headache around the eye.
3. Photophobia
4. Redness
5. Lacrimation
6. Blurring of vision: due to edema of the cornea, turbidity of aqueous & vitreous humor and other causes (signs) that will be explained later in the lecture.
7. Posterior uveitis may not be painful, *no sensory innervation*
8. Associated symptoms of systemic diseases

Associated symptoms of systemic diseases

1. Respiratory symptoms : cough ,SOB and sputum associated with TB & sarcoidosis .
2. Skin manifestations :

Erythema nodosum seen in granulomatous diseases as Sarcoidosis & Behjet

Thrombophelbitis in Behjet

genital & oral ulcers

Psoriasis in Psoriatic arthritis

-
3. Joint symptoms : Ankylosing Spondylitis, Juvenile arthritis, Reiter"s arthritis
 4. Bowel disease : Ulcerative Colitis, Crohne"s disease, Whipple disease
 5. Infectious diseases :

Syphilis

Herpes specially HZO

CMV specially in AIDS patients

Fungal and metastatic infections in immunocompromised patients

Signs

1. Lid edema



2. Ciliary injection



3. Keratic precipitate



Keratic precipitates, clusters of inflammatory cells adhering to the corneal endothelium

4. Aqueous flare



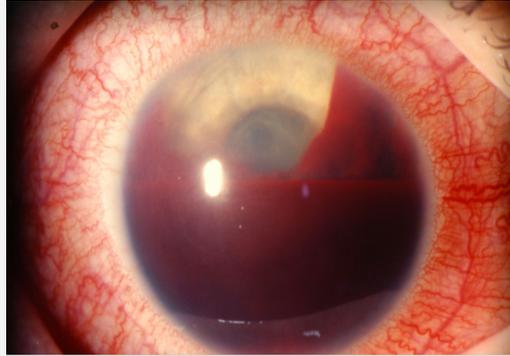
5. Hypopyon



6. Corneal edema



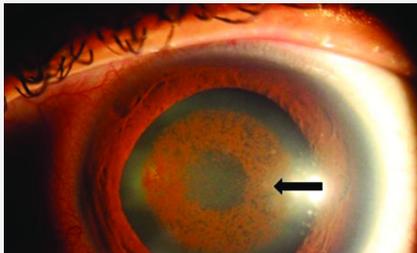
7. Hyphema



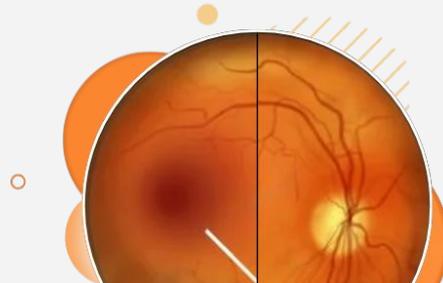
8. Muddy iris



9. Pigmented lens



10. Macular edema



11. Eye tenderness

12. Decreased visual acuity due to

corneal edema — turbidity of aqueous humor

keratic precipitate — severe miosis due to ciliary muscle spasm

macular edema

13. Posterior synechia

14. IOP is decreased in acute phase, while elevated in chronic phase.

Diagnosis

Is based on Hx and P/E.

Investigations are done to determine associations that cause uveitis

*CXR ,Ca and ACE serum level to diagnose Sarcoidosis specially if associated with large KPs and iris nodules .

*HLA B27 confirm the diagnosis of ankylosing spondylitis .

*TORCH in patient with classical Toxo lesions

*CMV / HIV / ANA

Treatment aims

1. Relieve pain and inflammation in the eye .
2. Prevent damage to ocular structure .
3. Prevent visual loss from retinal or optic nerve damage

Treatment

Steroid is the mainstay of treatment .

Topical ,systemic and injections according to the type .

Dilating eye drops to relieve pain resulting from ciliary spasm :

- *Mydriaticum

- *Cyclopentolate

- *Phenylphrine

- *Atropine

Injections of mydriaticum can help to release resistant synechiae .

****Don't forget treatment of the systemic cause of uveitis**

Antibiotics and antiviral in infectious causes as Toxoplasma & CMV

Immunosuppressive drugs as cyclosporine & Azathioprine in severe forms of uveitis as in Behcet disease .

Macular edema if developed needs treatment .

Causes of uveitis

1. Infectious

e.g. Toxo or Post-op infection

2. systemic disease

e.g. Ankylosing spondylitis or sarcoidosis

3. Ocular disease

e.g. Advanced cataract

Ankylosing Spondylitis

A seronegative inflammatory arthritis of the spine .

Association with HLA B27

Anterior uveitis and AS the HLA B27 is 90% .

20% of AS will have Ant .Uveitis

Males >Females (3 : 1)

Backache and spine related rheumatological complaints . * Morning stiffness

Sacro-iliac spinal X-ray



Peripheral joints involved in minority of cases .

Recurrent attacks of Ant Uveitis

Treatment & prognosis:

1. Ant .Uveitis treatment
2. Rheumatological consultation .
3. If acute attacks of uveitis are treated properly vision prognosis is good .

Reiter's disease

Predominantly affect males

It comprises :

1. Urethritis
2. Conjunctivitis
3. Arthritis (Large joints usually)
4. 40% of patients develop acute anterior uveitis



Juvenile Chronic Arthritis

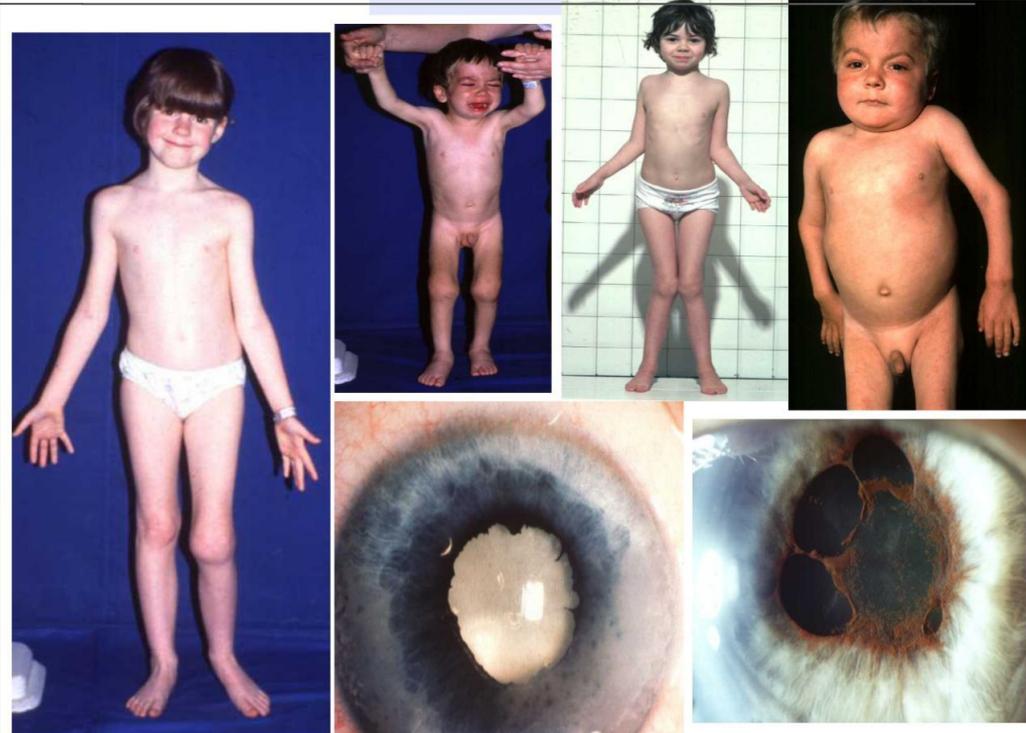
Seronegative chronic arthritis

present in children

Presentation as :

1. Pauci articular
2. Poly articular
3. Systemic onset

Pauci articular presentation more
to have ant Uveitis and positive ANA .



JCA presentation

Usually asymptomatic

Profound visual loss may result from cataract or other ocular associations may be found by chance .

Usually the uveitis is asymptomatic (white eye) .

Cataract & glaucoma may develop and cause visual symptoms .

70% of the cases are bilateral

JCA investigations & treatment

Negative RF

Positive ANA according to the type .

Treatment of uveitis .

Treatment of the arthritis

Screening for the ophthalmic complication is very important since uveitis is mostly asymptomatic

Fuchs heterochromic uveitis

Idiopathic chronic uveitis present in adults .

Usually do not present with typical history of iritis .

Blurred vision floater may be the initial presentation .

FHU signs

Mild anterior uveitis with out conjunctival injection .

Diffuse KPs

No posterior synechiae

Heterochromic iris due to the loss of iris pigment epithelium .

Vitreous condensations

Cataract and glaucoma

Corneal edema lately

FHU treatment

Steroids are not effective in treatment & controlling the inflammation .

Treatment of cataract

Treatment of glaucoma

Toxoplasmosis

The infection can be congenital or acquired

Patient may complain of hazy vision ,floater and painful eye .

Retina is the principal structure involved with the secondary inflammation occurring in the choroid .

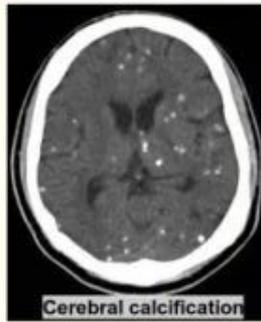
Active lesions often located posteriorly appearing as a creamy focus near an old scar

Vitritis may occur

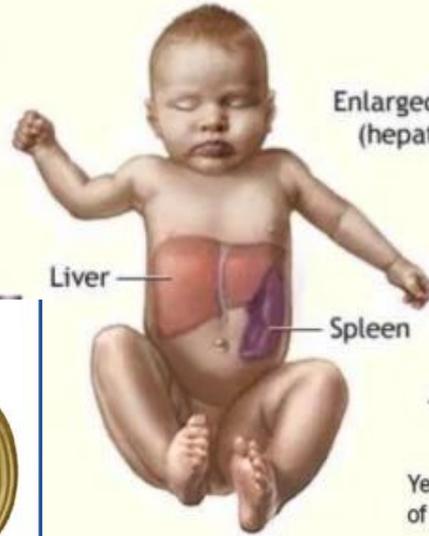
AC may show inflammation .



Congenital toxoplasmosis



Cerebral calcification

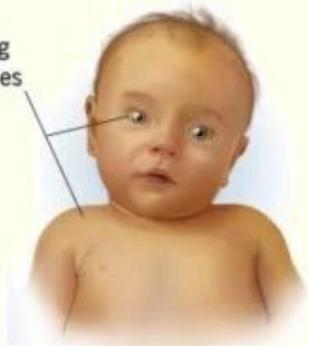


Enlarged spleen and liver (hepatosplenomegaly)

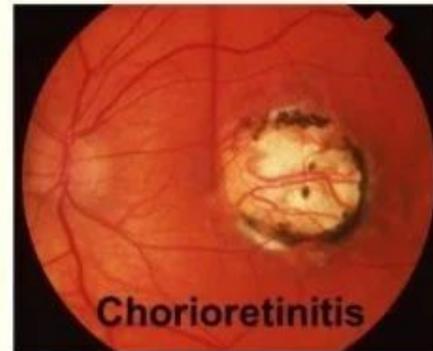
Liver Spleen

Jaundice in Newborns

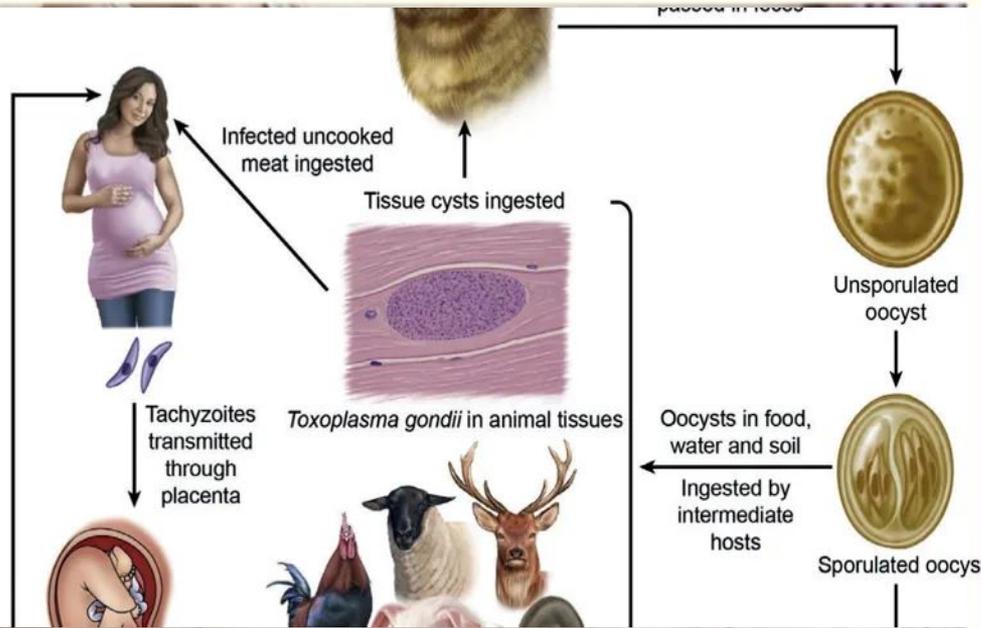
Yellow coloring of skin and eyes



Newborn with jaundice



Chorioretinitis



Toxoplasmosis Investigation & Treatment

Toxo antigen detection ELISA

IgM

Treatment usually not required unless in:

1. Immunocompromised
2. Macula or optic nerve threatening lesions

Antiprotozoal , antibiotics and steroids

HIV & CMV retinitis

Ocular manifestations are common in HIV patients :

1. microvascular occlusion
2. corneal endothelial deposits
3. neoplasm of the orbit and eye
4. neuro-ophthalmic disorders (CNIII palsy
5. opportunistic infections as (CMV ,HSV &toxoplasmosis)

CMV retinitis

Usually in a known AIDS patient

Patient present with floater and decreased vision .

There is whitish retinitis associated with hemorrhage .

These lesions may affect the macula & optic disc .

Vitritis is common .

CMV retinitis treatment & prognosis

Gancyclovir and or foscarnet can be given systemically .

Periocular injections of Gancyclovir

Intravitreal Gancyclovir

Recurrence is common

Sympathetic Ophthalmitis

Penetrating eye trauma involving retina or choroid may induce severe peculiar form of uveitis which involve both the traumatized and the fellow eye .

Usually present within 3months of trauma

It can occur as early as 2weeks and as late as 2 years .

It can be very severe to the degree to lose vision in both eyes .

The cause is thought to be immune response to the retinal and uveal antigens .

Can be prevented by early enucleation of the severely injured eye .

Sympathetic Ophthalmitis presentation & treatment

Pain & decreased vision in the fellow eye .

Swollen iris & panuveitis .

High dose of steroids are required .

Early enucleation

Patient warning about its possibility after eye trauma and multiple eye surgeries .

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بالتوفيق

