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VISION EXPO

Practical Approach to Uveitis Management

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Statement of Financial Disclosures

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- Dompe-Consultant
- Tarsus-Consultant
- Ocuphire-Consultant
- Oyster Point Pharma-Consultant
- Eyenovia-Consultant

Case Study

- 23yo Caucasian Female

- CC: painful left eye

- HPI: started 3 days ago

Sudden, onset with no improvement with ATs
(+)photophobia
(+)mild blurry vision

History

- **Medical history**: unremarkable
- **Medications**: birth control
- **Ocular history**: unremarkable
  LEE 2 years ago
- Social history: (-)EtOH, nonsmoker

Entrance Testing

- **BCVA**: 20/20 OD; 20/25 OS
- **Pupils**: PERRLA, (–)APD
- **Confrontational VF**: full
- **EOMs**: Full & Smooth OU
- **IOP**: 12mmHG OD, 13mmHG OS

Slit Lamp Findings

	OD	OS
Cornea	WNL	WNL
A/C	**Quiet**	**1+ cells**
Iris	Blue, (–)TIDs, (–)synechiae	Blue, (–)TIDs, (–)synechiae
Lens	Clear	Clear

Posterior Pole Findings

	OD	OS
Vitreous	Quiet–no cells	Quiet–no cells
Optic nerve	Pink, healthy rim 0.3/0.3 C/D ratio	Pink, healthy rim 0.3/0.3 C/D ratio
Macula	Flat & clear	Flat & clear
Retina	No breaks/tears	No breaks/tears

What's your diagnosis?

Acute, anterior, non-granulomatous uveitis OS

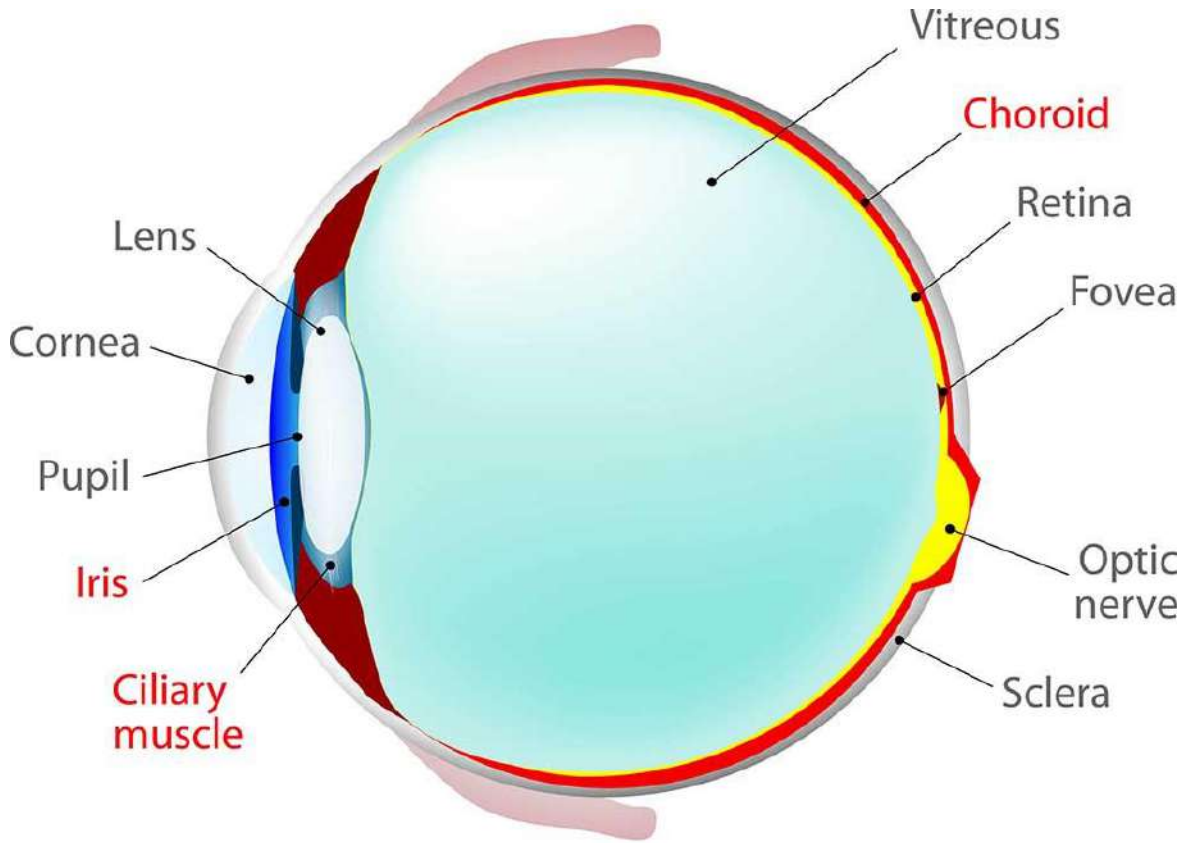
Uveitis

- Common cause of red & painful eye
- 10-20% of blindness in US
- 3rd leading cause of blindness in developed countries
- Important associations with systemic disease

What is Uveitis?

- Inflammation of the Uveal Tract

- Uveal Tract:
  - Iris
  - Ciliary Body
  - Choroid



Inflammation Basics

- "Inflammation" (Latin, *inflammatio*, to set on fire)

- Inflammatory response Events:
  - (1) vascular changes: blood flow increases and fluid and plasma proteins leak into the inflamed tissue

  - (2) cellular infiltration: leukocytes adhere to vascular endothelium and migrate through the endothelial layer to gain access to surrounding tissue

  - (3) chemotaxis: leukocytes follow a chemical gradient to the site of insult and unleash potent killing mechanisms.

What is Uveitis?

- Inflammation of the Uveal Tract

- Uveal Tract:
  - Iris
  - Ciliary Body
  - Choroid

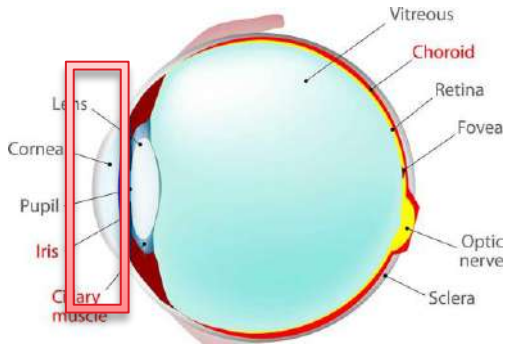
Highly vascularized tissues more commonly involved with inflammation

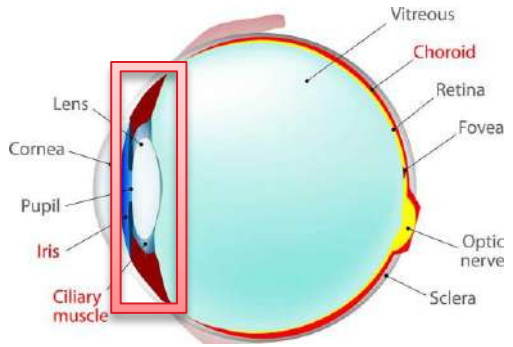
Uveitis Classification

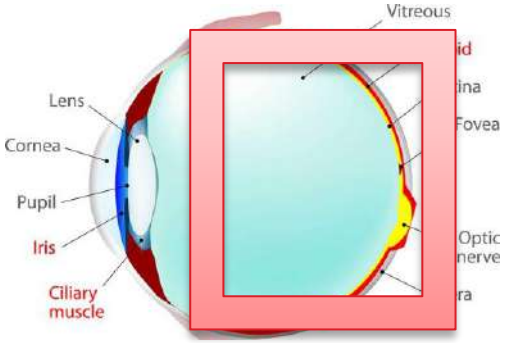
1. Anatomical=What structures are involved?
2. Time-Course of Disease =When did it occur?
3. Pathophysiology=What type of inflammation?
4. Laterality=Which eye?

Anatomical Classification

- Anterior Uveitis (AU)
- Intermediate Uveitis (IU)
- Posterior Uveitis (PU)
- Panuveitis







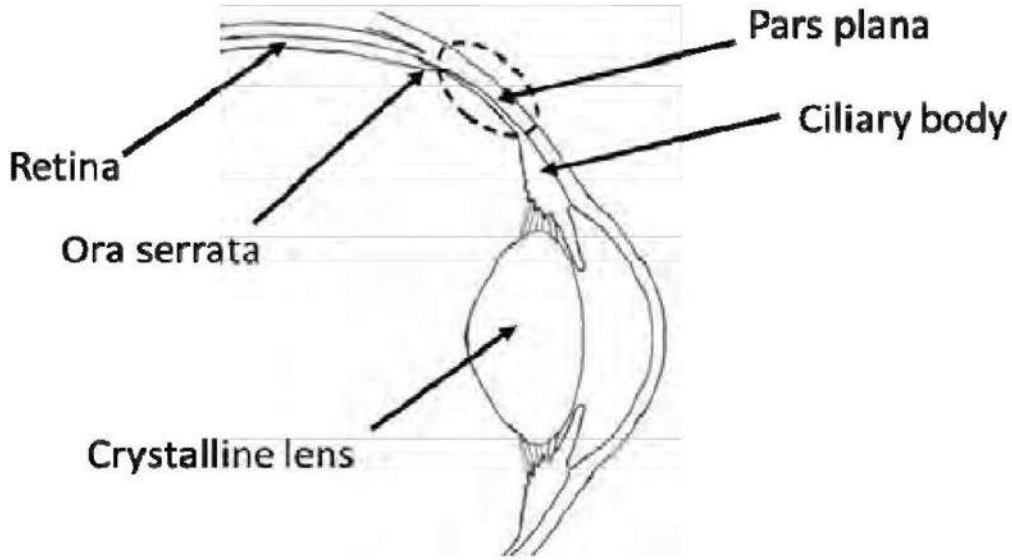
Classified according to what part of the eye is affected the most

Anterior Uveitis

- Inflammation of anterior segment (iris & anterior ciliary body)
- Inflammation from breakdown of blood-aqueous barrier
- Most common form (50-60% of all cases)
- 30-50% have underlying systemic etiology

Intermediate Uveitis

- Inflammation of the pars plana, vitreous, and peripheral retina
- “pars planitis” =subset category & only used if there is an absence of associated infection (i.e. idiopathic)
- Etiology
  - 70% Idiopathic
  - 22% Sarcoidosis
  - 8% Multiple Sclerosis
  - 1% Lyme Disease



Posterior Uveitis

- Inflammation of the posterior pole (retina, choroid, optic nerve)

- Etiology
  - 25% toxoplasmosis
  - 13% Idiopathic
  - 12% CMV
  - 8% Sarcoidosis
  - 8% SLE

Panuveitis

- Inflammation of anterior chamber, vitreous, retina, and/or choroid

- Etiology
  - 22% Idiopathic
  - 14% Sarcoidosis
  - 12% Bechet's
  - 5% Syphilis
  - 2% TB

Clinical Classification

- Acute: sudden onset <3mo
- Chronic: >3months
  - Can be a “white eye”
- Recurrent: repeated episodes separated by period of inactivity without treatment for 3+mo

Pathophysiology Classification

- Non-granulomatous
- Granulomatous

Non-granulomatous

- Inflammation causes protein & WBC to enter aqueous humor
- Inflammatory cells: lymphocytes, plasma cells, macrophages
- More common in non-infectious etiologies
- Can be acute or chronic
- Predilection for iris & ciliary body

Granulomatous

- Inflammatory cells: macrophages, epithelial cells, multi-nuclear giant cells
- Usually infectious, toxic, autoimmune, or neoplastic etiologies
- Predilection for posterior segment
- Mutton fat KPs, Koeppe/Busacca nodules, Vitreous precipitates

Helpful Documentation

- Acute non-granulomatous anterior bilateral uveitis
- Chronic non-granulomatous anterior uveitis OD
- Acute, granulomatous bilateral panuveitis

Etiology Detective!

Key to determining the cause of uveitis:

- 1) Accurate & thorough history
- 2) Perform a thorough ophthalmic exam

What is the Etiology?

-Lab tests are NOT a substitute for history & exam

-However lab tests are crucial for proper management

History first → then laboratory testing/tissue biopsy may confirm etiology spectrum

Exam=History

- Past Medical History
  - Medication history
  - History of autoimmune disorders
  - Prior ocular surgery or trauma
- Complete Review of Systems
- Family History
- Social History: smoking, travel, occupation, drug use

Exam

- Visual Acuity
- Pupillary function
- Motility, confrontation fields
- IOP
- Slit Lamp
- Dilated Fundus Exam

Goal=Determine infectious vs non-infectious etiology

Common Symptoms

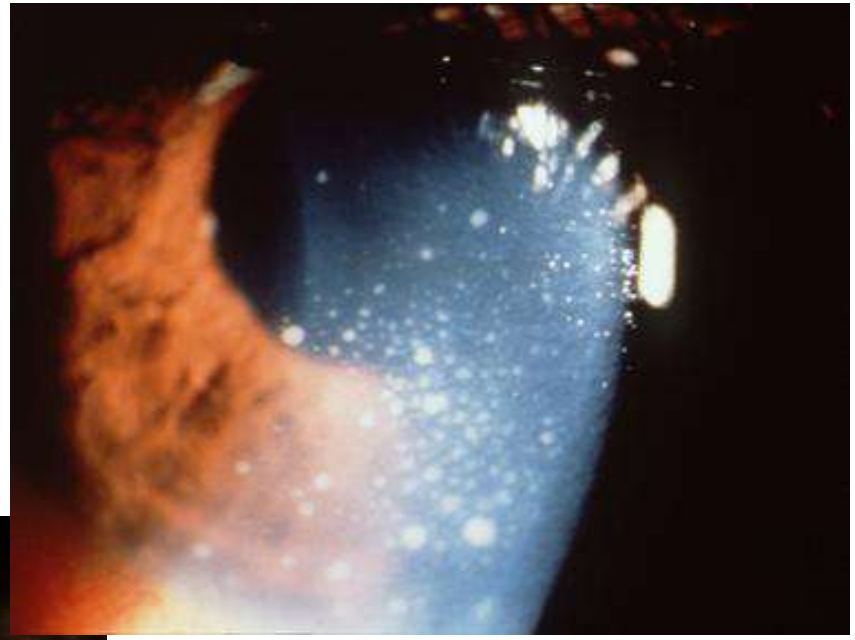
- Eye pain or ache
- Photophobia
- H/x of recurrent red eyes
- Recent ocular trauma
- Injection
- Lacrimation
- Decreased vision
- Floaters

Anterior Segment

- Conjunctiva
  - circumcorneal injection
  - conjunctival nodules/granulomas

- Cornea
  - Epithelium dendrites
  - Stroma edema
  - Endothelium: keratic precipitates (KPs)
    - Size: small, large, non-granulomatous, granulomatous
    - Color: white, pigmented
    - Distribution: Arlt's triangle, diffuse

New KPs=white with smooth borders



Chronic KPs=pigmented with irregular borders

Anterior Segment

- Anterior Chamber
  - Depth-Shallow? Angle Closure?
  - Cells-Hypopyon? Hyphema? Pigmented cells?
  - Flare
  - Structural Changes-rubeosis?

Anterior Segment

- Anterior Chamber: cells & flare

- Grading Cells (SUN)

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

Field Size 1mm X 1mm slit beam

Anterior Segment

- Grading Flare (SUN)

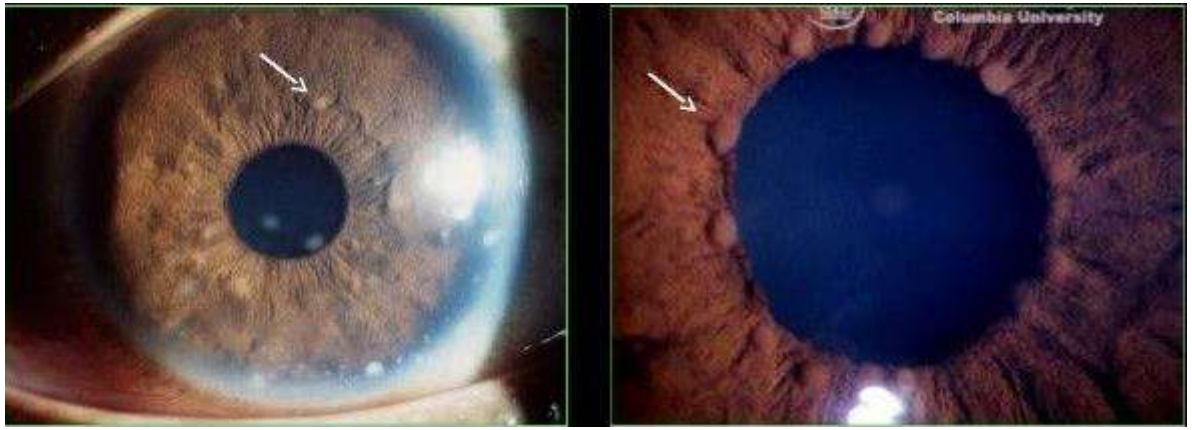
Grade	Description
0	None
1+	Faint
2+	Moderate (iris & lens details clear)
3+	Marked (iris & lens details hazy)
4+	Intense (fibrin or plastic aqueous)

- Indicative of chronic inflammation
- Flare possibly predictive of adverse vision impairment
(Holland 2007)

Anterior Segment

- Iris
  - Miosis
  - Atrophy
    - Sectoral-VZV/HSV
  - Color-heterochromia?
  - Contour

Anterior Segment



- Nodules
  - Koeppe nodule=pupillary margin
  - Busacca nodules=on surface
- Synechia
  - PAS (Peripheral Anterior Synechia)=irido-corneal adhesion
  - PS (Posterior Synechia)=iris-lens adhesion
  - Document location

Intraocular Pressure

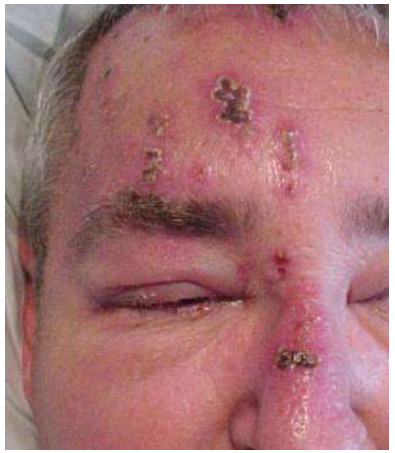
- Variable
- Usually low in acute phase
- Usually Elevated in chronic phase
- Herpetic Etiology: trabeculitis affects outflow→ elevated IOP

Posterior Pole Findings

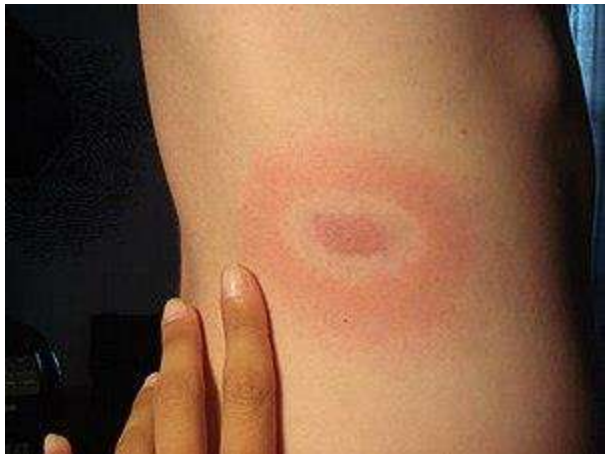
- Vitreous=cells vs. spillover
- Macula-Atrophy? CME? Thinning?
- Vessels-sheathing? Vascular occlusion?
- Retina-whitening? Edema? Inflammation?
- Choroid-old or active scars?
- Optic nerve- edema? NVD?
- Peripheral -RD? neovascularization? Exudates?

Non-Ocular Clinical Clues

- Cutaneous
  - Vesicular or dermatomal rash? HSV/VZV



  - Erythema chronicum migrans? Lyme borreliosis
  - Psoriasis



Non-Ocular Clinical Clues

- Glandular Inflammation=Sarcoidosis?
  - Dacryoadenitis
  - Parotitis
    - Heerfordt's Syndrome

Laterality

- Unilateral Cases: HSV, VZV, CMV, Toxos
  - IOP elevation (Herpetic or toxoplasmosis)
  - Sectoral iris atrophy-VZV, HSV
  - Corneal scarring/edema-VZV, HSV

- Not always helpful
  - HLAB27 & scleritis often unilateral

Common Complications

- Cataracts
- Band Keratopathy
- Glaucoma
- Cystoid Macular Edema

Suspect Systemic Disease if…

- Mutton Fat KPs
- Chronic & Recurrent
- Bilateral or Alternating
- Unresponsive to treatment

Uveitis Etiology

- Traumatic
- Idiopathic – most common
- Non-Infectious="auto-immune"
- Infectious

Non-Infectious Etiology

- Seronegative spondyloarthropathies = 50% cases
- Sarcoidosis
- Systemic Lupus Erythematous
- Juvenile Idiopathic Arthritis
- Behcet's disease

Seronegative spondyloarthropathies

- Family of rheumatologic disorders
(back pain, uveitis, GI symptoms, rashes)

- Ankylosing spondylitis (AS)

- Psoriatic arthritis (PsA)

- Inflammatory bowel disease (IBD) associated arthritis

Sarcoidosis

- Multisystem disease of unknown origin
- Predominantly affects the lungs
- 50% of cases have ocular involvement
- Non-caseating granulomas composed of epitheloid & giant cells → secrete ACE

Juvenile Idiopathic Arthritis

- Accounts for 20-40% of pediatric uveitis patients
- Many different subcategories
- Often arthritis manifests before uveitis is detected

Systemic Lupus Erythematous

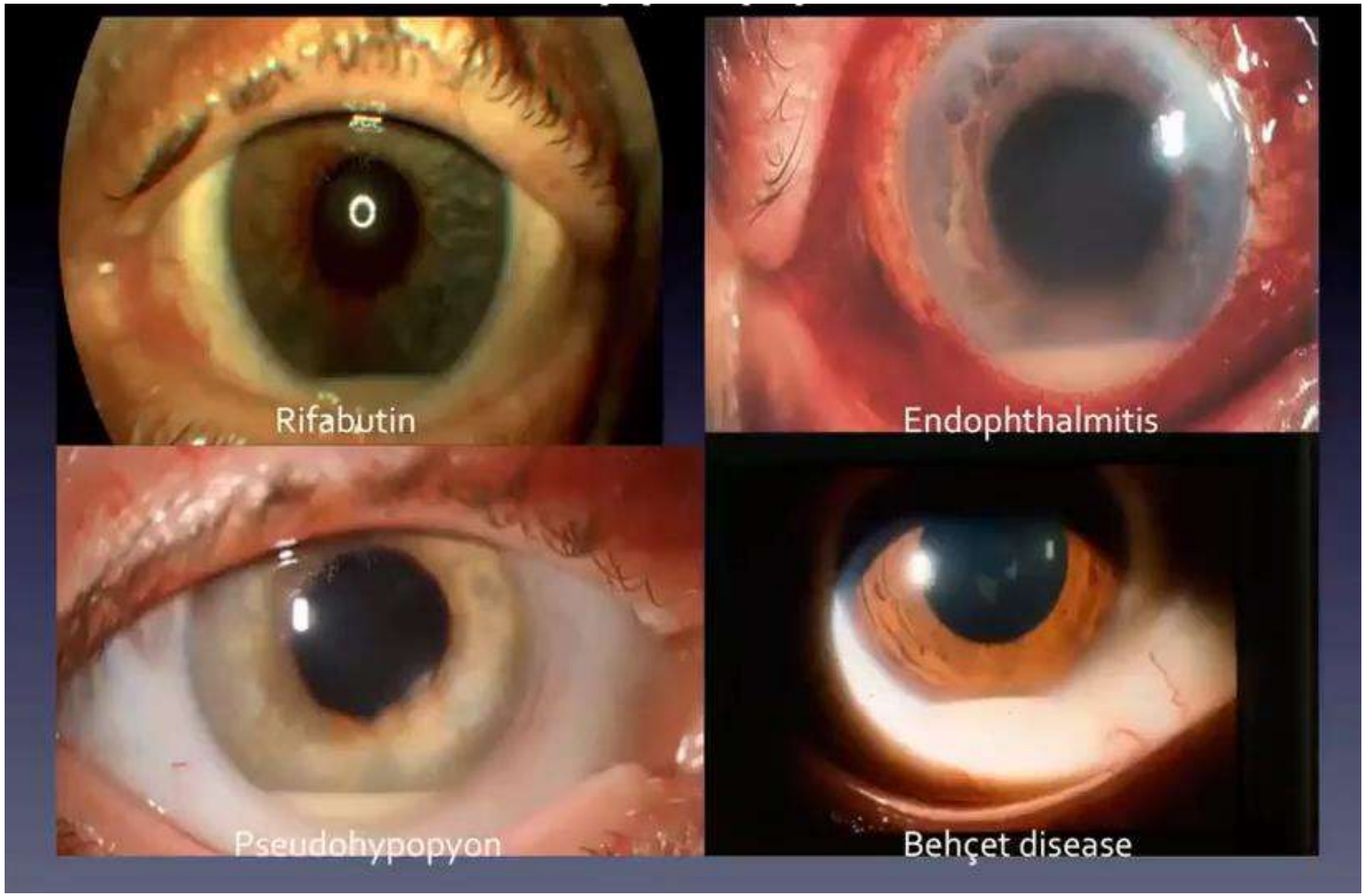
- Multi-system autoimmune disease
- Normal immune systems protect against pathogens (virus/bacteria), but ANA attacks cell nuclei triggering inflammation
- ANA levels elevated in 97% of SLE patients
- Can cause anterior uveitis

Behcet's Disease

- Triad
  - Oral ulcers
  - Genital ulcers
  - Ocular inflammation

- Hypopyon common finding

Hypopyon

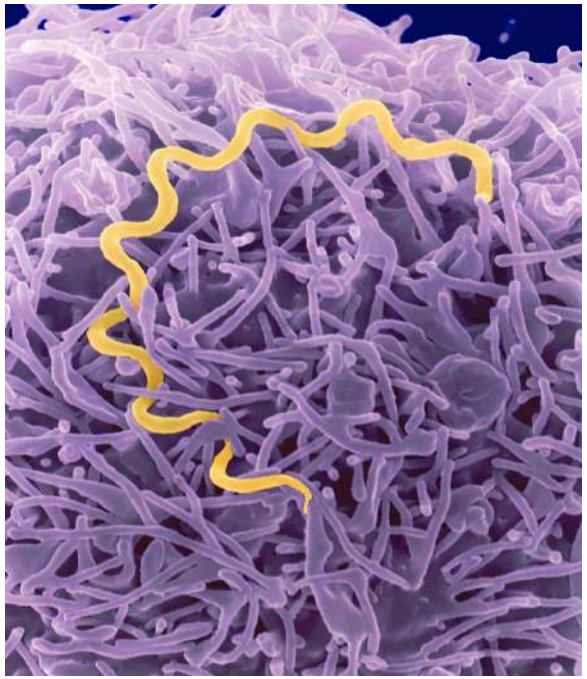

Rifabutin
Endophthalmitis
Pseudohypopyon
Behçet disease

Infectious Etiology

- Bacterial
  - Syphilis, Lyme, Tuberculosis, Endophthalmitis
- Viral
  - Herpes Simplex (HSV), Varicella Zoster (VSV), Cytomegalovirus (CMV)
- Fungal
  - Candida, Aspergillus, Histoplasmosis
- Protozoal
  - Toxoplasmosis
- Helminthic
  - Toxocariasis

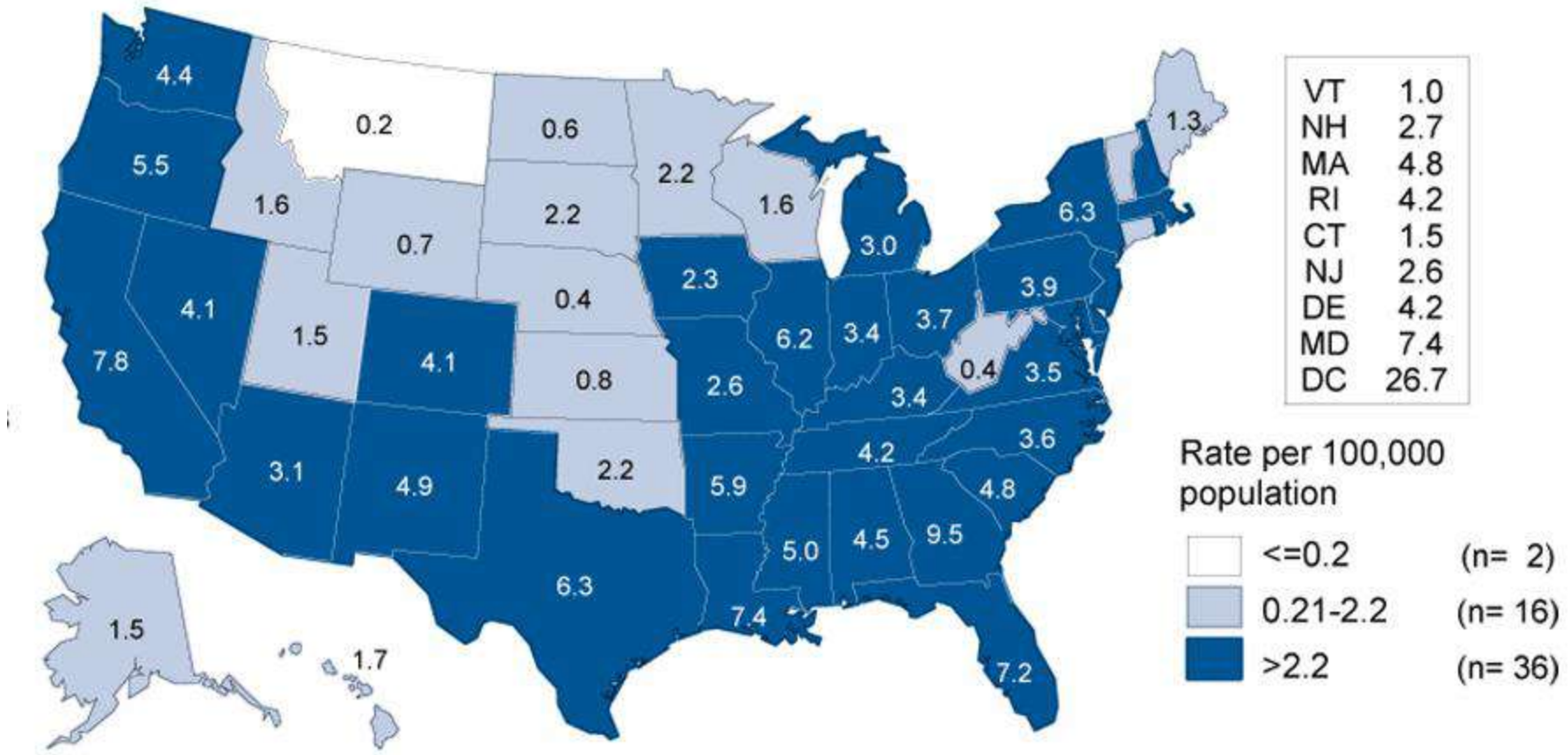
Syphilis

- **Systemic disease**: *Treponema pallidum*
  - Incubation period 2-4 wks
- **Eye**: "Great Imitator"
- **Epidemiology** (from CDC):
  - 46,042 new USA cases since 2011
  - 11.1% increase annually



1^0 & 2^0 Syphilis—CDC Rates by State, United States, 2012

Remains major health problem in South & Urban areas of US



http://www.cdc.gov/std/stats12/fig

Syphilis

Transmission:

- -Congenital or Acquired
- -Direct contact with 1^0 or 2^0 lesions

Risk factors:

- -High-risk sexual activities
- -Coexisting HIV infection
- -IV drug use

Acquired Syphilis Stages:

Latent= NO clinical signs

1^0

10-90 dys

Painless chancre

2^0

6wks-6mo

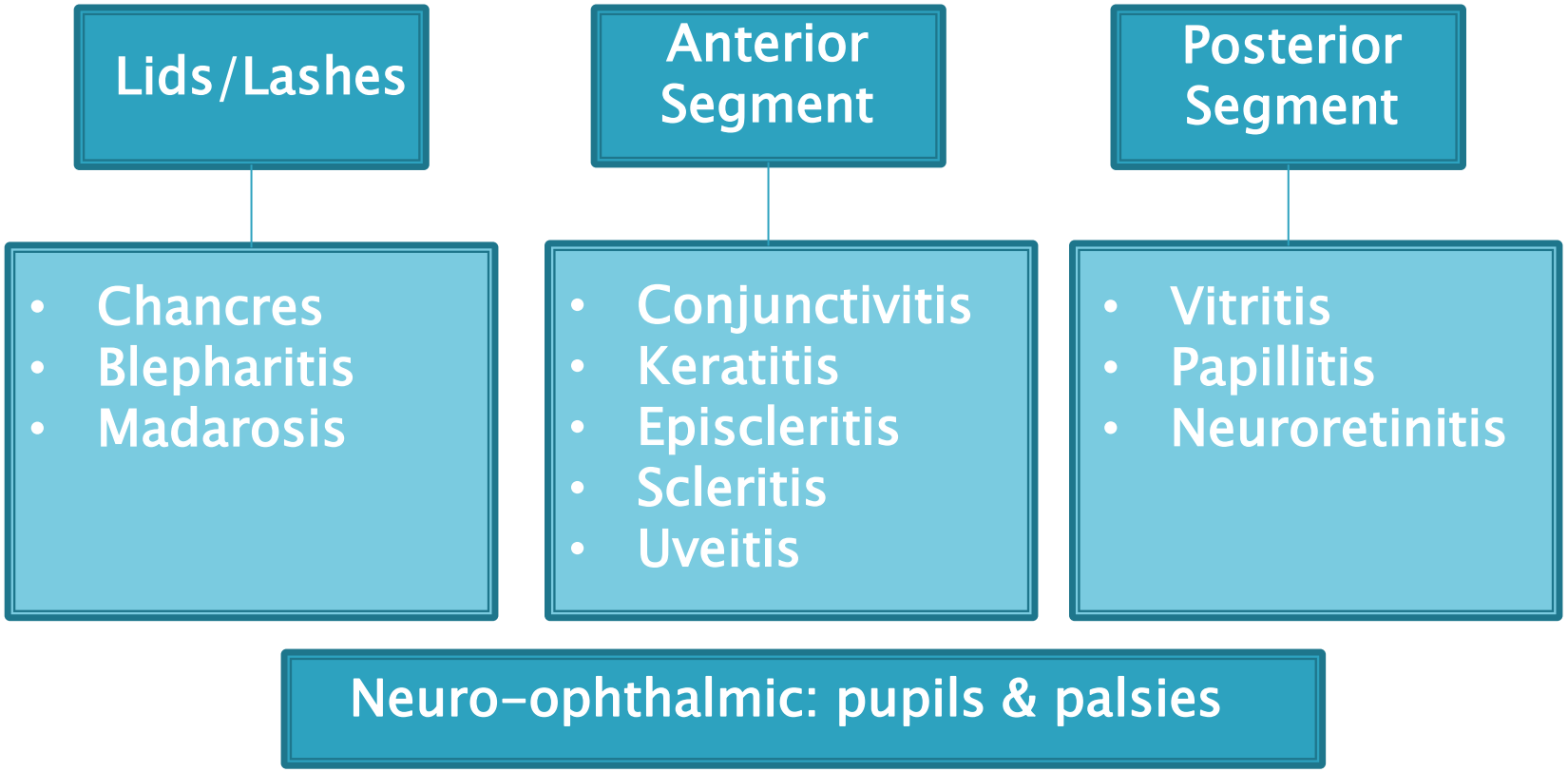
- Fever
- Malaise
- Skin rash

3^0

10-30yrs

- Cardiovascular
- Neurological
  - Stroke
  - **EYE**
  - Meningitis

Ocular Manifestations:



Syphilitic Uveitis

- **Neurosyphilis**
- Bilateral or Unilateral
- Non-granulomatous or Granulomatous
- Anterior, posterior, or both
  - Posterior=vitritis, retinitis, chorioretinitis
  - Posterior=55.2% cases
- HIV co-infection (60%)

Neurosyphilis Tx (2010 CDC Guidelines)

Ocular disease = Neurosyphilis

1. Aqueous PCN G 18-24 million units/day IV x 10-14 days
   - Alt: Procaine PCN 2.4 million units/day IM x 10-14 days PLUS PO Probenecid 500 mg QID x 10-14 days

2. CSF examination & HIV testing

3. Repeat LP Q6mo X 2 yrs

Lyme

- multisystem infection caused by the spirochete bacterium *Borrelia burgdorferi* –typically transmitted through the blacklegged tick

- Deer tick = transmit lyme
  - Ixodes scapularis=NE, Mid-atlantic, north-central
  - Ixodes pacificus=pacific coast

- Ticks not known to transmit Lyme disease:
  - Lone star ticks (*Amblyomma americanum*)
  - American dog tick (*Dermacentor variabilis*)
  - Rocky Mountain wood tick (*Dermacentor andersoni*)
  - Brown dog tick (*Rhipicephalus sanguineus)*

Lyme

- On the rise: 30,000/yr reported cases to CDC
  - True # is like 10X this
- Illness consistent with Lyme reported in Europe as early as 1883
- Most-common vector-borne disease in both Europe & North America
- 22 variants of tick bites

Lyme & the Eye

- Keratitis, Follicular conjunctivitis, scleritis, uveitis, CN palsies, optic neuritis, papilledema
- Non-ocular symptoms can vary
- 2017 Retrospective study: no response to any type of corticosteroid (Ab only)

Tuberculosis

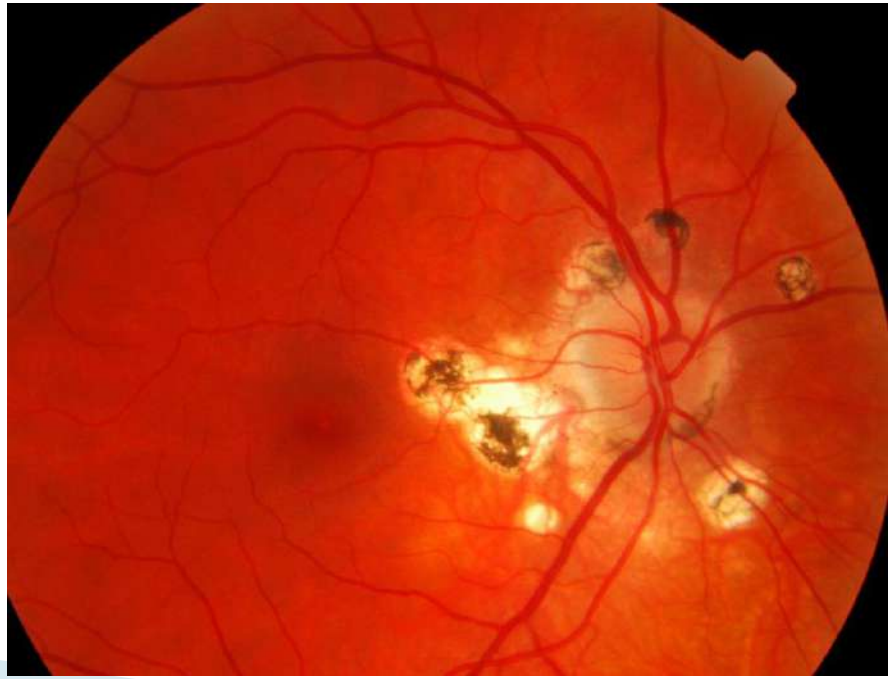
- caused by Mycobacterium tuberculosis
- Can occur from active infection or secondarily as a result of immune reaction to the mycobacterium
- Dx of intraocular TB is presumptive (after excluding other possible uveitis entities)
- Beware of TB Treatment ocular side effects
- Ethambutol: optic neuritis, color vision deficiencies, central scotomas, & retinal edema

Cytomegalovirus (CMV)

- Double stranded DNA virus in Herpesviridae family
- Associated with HIV/AIDS (immunocompromised patients)
- Transmitted by saliva, breast milk, sexual contact, organ transplantation
- Anterior Uveitis, Retinitis, Corneal Endotheliitis
- MOA theories: reactivation is primary cause of inflammation -or- reactivation occurs as secondary consequence of macrophage/dendritic cell activation

Presumed ocular histoplasmosis syndrome (POHS)

- Secondary infection with the yeast form of *Histoplasma capsulatum*
- Triad:
  - Atrophic chorioretinal scars
  - Peripapillary atrophy (PPA)
  - Absence of vitritis

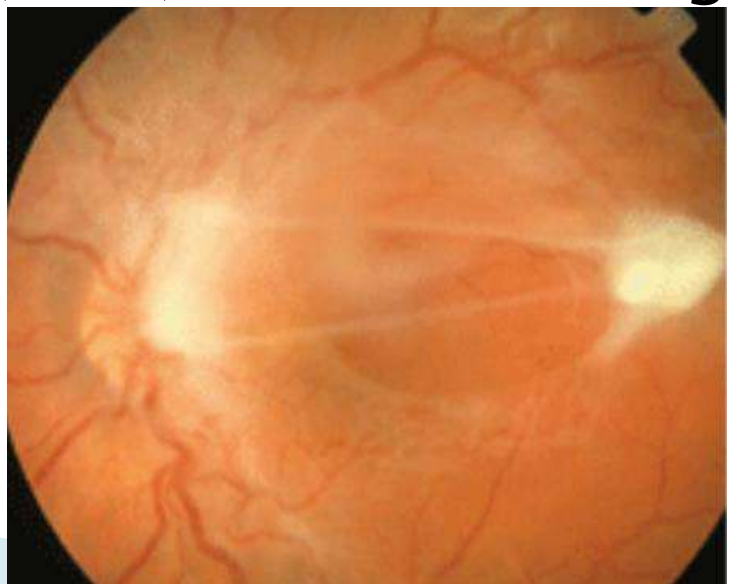


Toxoplaxmosis

- *Toxoplasma gondii*: single-cell protozoan parasite
- Hosts: **cats**, birds, reptiles, mammals
- Congenital or acquired
- Transmitted via direct contact with
  - Direct contact with contaminated food, soil, sand or cat litter
  - Consumption of raw or undercooked meat
- White, chorioretinal, inflammatory lesion with an overlying vitritis

Toxocariasis

- Rare infection caused by roundworms (*toxocara canis* or *toxocara cati)*
- *Unilateral 90% of the time*
- Vitritis, leukocoria, endophthalmitis, central posterior or peripheral granuloma
- Ultrasound biomicroscopy (UBM)=detection of granulomas



Fuch's Heterochromic Iridocyclitis

- Chronic, low grade unilateral non-granulomatous anterior uveitis
- 2-3% of all uveitis cases
- Asymptomatic
- KPs have stellate appearance
- Iris atrophy: decrease stromal melanocytes
- Heterochromia ("moth eaten appearance") lighter iris → involved eye
  - Reversed Heterochromia → dark iris is involved eye

Fuch's Heterochromic Iridocyclitis

- Unclear etiology: Viral? Associated diseases?
- To treat or not to treat
  - Few cases require therapy
- Beware of complications:
  - Cataract
  - Glaucoma
  - Complications with cataract surgery (iris not dilated as well, acrylic vs silicone IOL)

When to order Laboratory Testing

- Recurrent or Chronic
- Bilateral
- Posterior pole findings
- Unusual severity
- Poor response to treatment

Lab Tests for Uveitis

Complete Blood Count (CBC)

- Order with differential
- Evaluates general health status
- Viral, bacterial, leukemia
- Helps differentiate between noninfectious & infectious

Erythrocyte sedimentation rate (ESR)

- Nonspecific for inflammation
- Measures how quickly erythrocytes settle at bottom of test tube
- Normal values: 0-13mm/hr males, 0-20mm/hr females
- >50mm/hr→giant cell/temporal arteritis

C-Reactive Protein

- Blood test marker for inflammation in body
- CRP produced in liver & sent into bloodstream in response to inflammation
- Normal <10 mg/L
- >10 mg/L →serious infection, trauma, chronic disease

Antinuclear antibody (ANA)

- Plasma cells produce antibodies directed against the body's tissues

- Positive values:
  - SLE
  - TB
  - Hepatitis
  - Lymphoma
  - Sjogern's
  - JRA
  - Scleroderma

Human Leukocyte Antigen (HLA-B27)

- Ankylosing spondylitis
- Reiter's Syndrome/Reactive Arthritis
- Psoriatic Arthritis
- Inflammatory Bowel Disease Arthritis

**Beware of false positives

Angiotensin-Converting Enzyme (ACE)

- Enzyme produced from granulomatous cells
- Serum levels reflect total amount of granulomatous tissue in body
- Sarcoidosis=75% sensitivity, 95% specific
- False Positives: TB, Lymphoma, leprosy
- Biopsy required for dx of Sarcoidosis

VDRL, RPR, FTA-ABS

- Syphilis
- VDRL or RPR=Initial screening
- FTA-ABS=confirm the diagnosis

Tuberculosis

- Purified protein derivative (PPD)
- Quantiferon Gold
- Chest X-ray

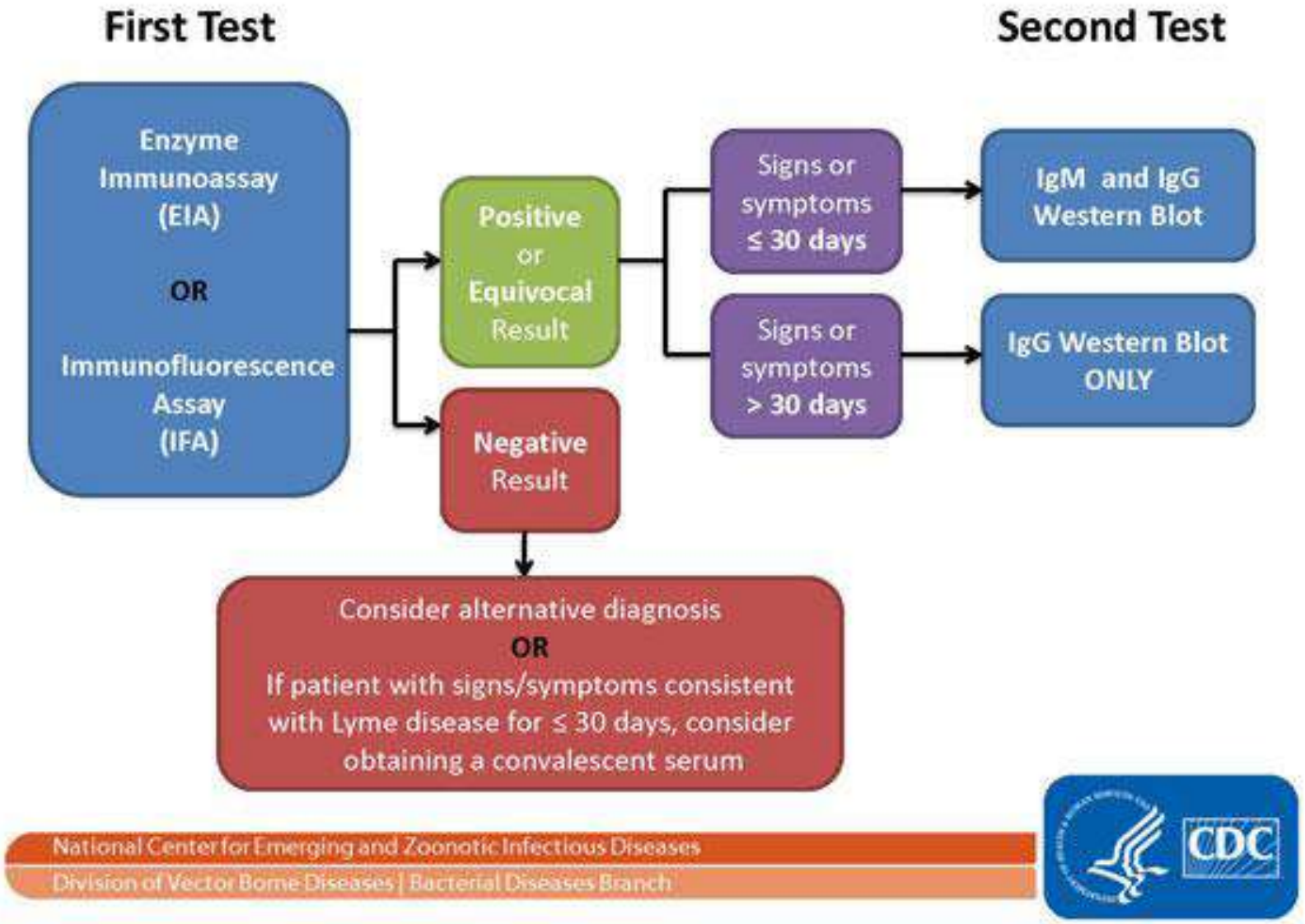
Rheumatoid Factor (RF)

- Helps differentiate RA from other chronic conditions
- Can be (+) in Sjögren's syndrome, SLE, syphilis, sarcoidosis, & liver disease

Enzyme-linked immunosorbent assay (ELIZA)

- Detects antibodies in blood
- Helpful in identifying toxoplasmosis, toxocariasis, or Lyme

Two-Tiered Testing for Lyme Disease



Always Rule Out

- Tuberculosis
- Syphilis
- Sarcoidosis

Treatment Goals

- Preserve Vision
- Reduce Pain
- Eliminate inflammation
- Identify Source
- Prevent Synechia
- Manage IOP

Treatment=Topical Steroids

- Concentration
  - 0.1% dexamethasone vs 1% prednisolone acetate

- Corneal penetration
  - Prednisolone greater than dexamethasone
  - 0.05% difluprednate = synthetic fluorinated pred derivative
    - Greater glucocorticosteroid receptor binding
    - Greater corneal penetration (addition of acetate ester at C-21)

Treatment

- Be aggressive
- Dosing
  - QID to q1hr
- Taper
- Watch IOP spike

Treatment

- Cycloplegics/Mydriatics
  - Improves comfort
  - Reduces leakage from Iris & CB
  - Prevents & breaks posterior synechiae
- Glaucoma Medication
  - Avoid prostaglandin
- Oral Steroids, steroid injections, immunosuppresive therapy, implant devices

Appropriate Follow-up

- Mild: 4-7days
- Moderate: 2-4 days
- Severe: 1-2 days
- Resolved: q1-6mo

When to Refer

- Infectious →STAT
- Intermediate, Posterior, Panuveitis
- Non-infectious w/systemic involvement → work with PCP, rheumatology, or appropriate provider

Collaborative Care Steps

- Report to the State/CDC
- Letter to PCP/appropriate specialist
- Make patient aware they may need specialist depending on clinical outcome

Case 1 Flashback-Treatment

- 23yo acute, anterior, non-granulomatous uveitis
- 1% pred acetate q2hr OS
- 1 wk Follow-up Appointment
  - Complete Resolution
  - IOP stable
  - Tapered to BID X 3 days then d/c
  - No flare-up since

Case Study 2

- 25 yo AA Male
- **CC**: " blurry vision with black spots"

- **HPI**:
  - Sudden, painless decrease in vision OS
  - Onset: 4 days, upon awakening
  - (+) flashes of light and floaters X 4 days OS

History

- **Medical history**: (+) epilepsy, (–)STDs, (–)inflammatory conditions

- **Medications**:
  - Visine BID OU
  - 100 mg phenytoin sodium TID PO

- **Ocular history**: Blind OD (2009 eye trauma)

- **Social history**: (–)smoking, EtOH, drug use

Entrance Testing

- **BCVA**: NLP OD; 20/200 NIPH OS
- **Pupils**: fixed, miotic OD; round, minimal reactivity OS
- **Confrontational VF**: I & T constriction OS
- **EOMs**: Full & Smooth OU

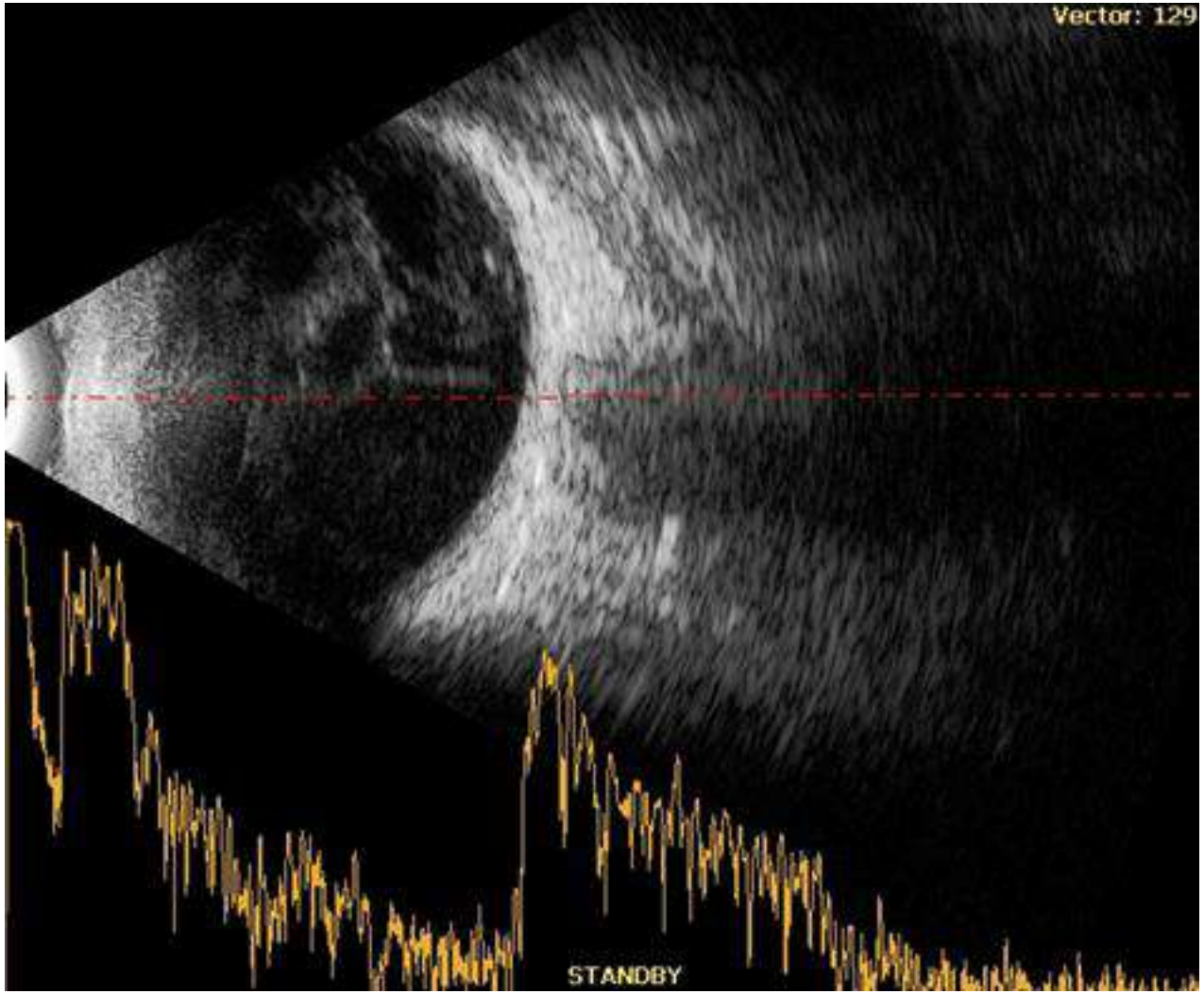
Slit Lamp Findings

	OD	OS
Cornea	WNL	Edema 3+ guttata **inferior KPs**
A/C	**Quiet** irido-corneal touch	**4+ cells/3+ flare** (-)hypopyon
Iris	Atrophy	I, IT, ST synechiae
Lens	Displaced w/PS	4+ pigment AC
Vitreous	No view	(+)cells-hazy view of post pole

Clinical Exam

- **IOP**: 7 OD/10 OS (mmHG)
- **Gonioscopy**: PAS OS
- **DFE:**
  - OD: no view (dense cataract)
  - OS: photo

B-Scan: OD



Differential diagnosis

- Sympathetic ophthalmia
- Sarcoidosis
- Syphilis
- Tuberculosis
- HIV/AIDS

Case Management

- 1% PA Q1hr & 1% Atropine BID OS
- Lab Work-up
- Uveitis specialist referral

Diagnostic Testing

- **Labs**:
  - FTA-ABS (inconclusive)
  - (+)RPR, TP-PA
  - (-) HIV, HSVI IgG, HSV II IgG, HSV IgM, Lyme, EBV, WNV, Quantiferon
  - Unremarkable CSF & CXR

Diagnosis

Syphilitic Panuveitis

Treatment

- Hospitalized
- 60mg prednisone PO QD
- 24 million units/day IV aqueous PCN X 10 days

Acquired Syphilis Stages:

Latent= NO clinical signs

1^0	2^0	3^0
10-90 dys Painless chancre	*6wks-6mo* • Fever • Malaise • Skin rash	*10-30yrs* • Cardiovascular • Neurological ➢ Stroke ➢ EYE ➢ Meningitis

Neurosyphilis Tx (2010 CDC Guidelines)

Ocular disease = Neurosyphilis

1. Aqueous PCN G 18-24 million units/day IV x 10-14 days
   - Alt: Procaine PCN 2.4 million units/day IM x 10-14 days PLUS PO Probenecid 500 mg QID x 10-14 days

2. CSF examination & HIV testing

3. Repeat LP Q6mo X 2 yrs

Post-Ab Treatment

- VA 20/100, PH 20/50 OS
- Essential Resolution of Uveitis & Vitritis
- F/U on going

Case Study #3

- 53yo Caucasian Female
- CC: irritated left eye
- HPI: started a month ago, previous provider treating for dry eye but sxs not improving
- (+)watering, photophobia, FB sensation

History

- **Medical history**: joint pain, no diagnosis of arthritis
- **Medications**: none
- **Ocular history**: glasses, dry eye

Entrance Testing

- **BCVA**: 20/30 OD; 20/30 OS
- **Pupils**: PERRLA, (–)APD
- **Confrontational VF**: full
- **EOMs**: Full & Smooth OU
- **IOP**: 14mmHG OD, 13mmHG OS

Slit Lamp Findings

	OD	OS
Conj	injection	injection
Cornea	Fine, white inferior KPs	Fine, white inferior KPs
A/C	**1+ cells**	**2+ cells**
Iris	(–)TIDs, (–)synechiae	(–)TIDs, (–)synechiae
Lens	Clear	Pigment on AC

Posterior Pole Findings

	OD	OS
Vitreous	Quiet-no cells	Quiet-no cells
Optic nerve	Pink, healthy rim 0.3/0.3 C/D ratio	Pink, healthy rim 0.3/0.3 C/D ratio
Macula	Flat & clear	Flat & clear
Retina	No breaks/tears	No breaks/tears

Diagnosis

Bilateral acute anterior non-granulomatous uveitis
-no posterior pole involvement
-remnants of posterior synechiae OS only

Treatment

- 0.05% difluprednate qid OU
- Due to bilateral presentation: CBC with diff, ANA, HLA-B27, PPD, CRP, VDRL/FTA-ABS, RF, and ACE analysis
- RTC 1 wk for f/u

Follow-up

- 1 week=inflammation still present, CPM
- 2 week=resolved, taper started
  - Lab work unremarkable
- 4 week=resolved, d/c topical steroid

4mo later

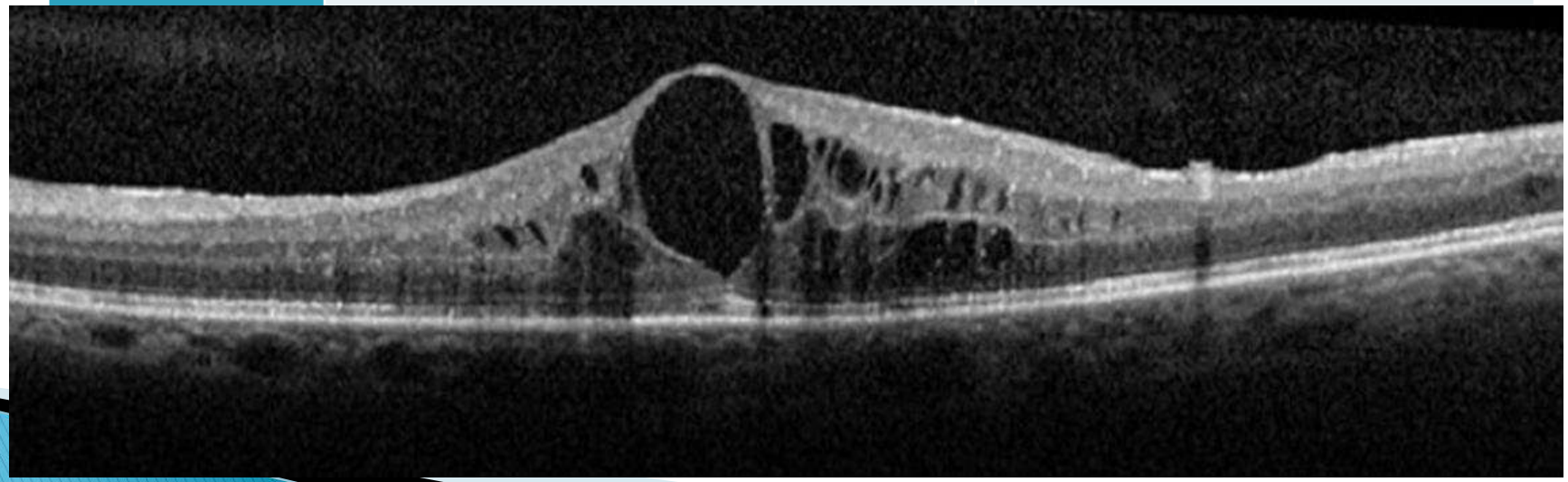
- Decreased vision OS, pain & irritation OU
- No changes to medical history
- VA 20/30 OD, 20/100 OS
- IOP 13mmHG OD, 15mmHG OS

Slit Lamp Findings

	OD	OS
Conj	injection	injection
Cornea	Fine, white inferior KPs	Fine, white inferior KPs
A/C	**1+ cells**	**1+ cells**
Iris	(–)TIDs, (–)synechiae	(–)TIDs, (–)synechiae
Lens	Clear	Pigment on AC

Posterior Pole Findings

	OD	OS
Vitreous	Quiet-no cells	Quiet-no cells
Optic nerve	Pink, healthy rim 0.3/0.3 C/D ratio	Pink, healthy rim 0.3/0.3 C/D ratio



Treatment

- Start 0.05% difluprednate qid OU, 0.5% ketorolac TID OS
- Referral to uveitis specialist
- 2 wks later:
  - resolved CME
  - resolved inflammation →steroid taper
  - IOP spike → Combigan (Rx'ed uveitis specialist)

2 years later

- Frequent recurrent uveitis flare-ups
- IOP controlled
- Repeated Lab work: still negative

What now?

Treating Idiopathic Etiology

- Still treat the current inflammation
- Chronic inflammation can damage structures
- Lab work

Uveitis Clinical Pearls

- Be a detective & find the cause
- Be aggressive when initiating topical steroid treatment
- Don’t taper too soon
- Optometrists play a key role

Questions?

Thank you!

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