Medical Management of HIV/AIDS Clinical Cases

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Case

• 48 yo Eritrean M presents to ED c/o abd pain, back pain, polydipsia, 30 lb wt loss, fevers.
  – Dx: poorly controlled diabetes (glucose in 300s) – started on Metformin, IVF

• After left ED, rapid HIV test came back positive

HPI

• That week- Ward 86 for initial intake:
  – CD4 68/7%, VL 537,519
  – Genotype: no major mutations
  – Truvada, Darunavir, Ritonavir, Raltegravir
  – TMP-SMX ppx

• Set up with PMD appointment at Ward 86 . . .

Initial Primary Care Provider Visit

• Patient doing poorly – stated back and abdominal pain had not changed

• Taking his ARVs with good compliance:
  – CD4 68/8% → 87/7%
  – VL 537K → 119 copies/mL
**ROS**

- Abdominal and mid-thoracic back pain – sharp, constant, 6-9/10, non-radiating, relieved with leaning forward
- Wt loss ~30 lbs over the last several months
- Fever
- Fatigue
- Insomnia
- ?Sweats
- Improved candida groin rash
- No diarrhea – had non-bloody diarrhea x few months but stopped in the last month
- No CP, SOB, cough, palpitations, thrush, dysuria, constipation, urinary or fecal incontinence, saddle anesthesia, neurologic deficits

**PMH**

- HIV – recently diagnosed, heterosexual, no IVDU
- Diabetes Type II – dx in 2001 when living in Las Vegas, had been on metformin in the past

**Meds**

- Truvada qd
- Darunavir 800 mg qd
- Ritonavir 100 mg qd
- Raltegravir 400 mg bid
- TMP-SMX DS daily
- Metformin 500 mg bid
- Clotrimazole cream

**Social Hx**

- Eritrean. Grew up in Ethiopia. Moved to Greece in 1987 as a refugee and worked in construction there for 3.5 years. Moved to U.S. 1991 green card - first Oakland, then Las Vegas, then Oakland, then SF in last 6-7 months.
- Works as taxi driver. Lives in apartment with roommate.
- Sexual Hx: 10-15 lifetime partners. In 1995 had girlfriend – “always” used condoms but one time broke and she became pregnant with their 15 yr old daughter. Ex-girlfriend and daughter both live in the East Bay. Does not keep in touch.
- No surgeries or tattoos.
- Tob: quit 2004
- ETOH: quit 2001, only social
- Drugs: denies
Social Hx

- Travel: back to Ethiopia and Eritrea in 2006, 2011, most recently a couple years ago for 2-3 months each. Rural areas with goats, sheep, cows, dogs, cats. Drank store milk and meat only.
- Diet: Cooks for self here in SF. Eats raw beef occas (2-3x/year) - Ethiopian delicacy. Last ate raw beef several months ago.
- Pets: none

Family Hx

- Parents deceased. Had 6 bro (3 died) and 3 alive (1 in Ethiopia and 2 in US). 3 bro (1 in Eritrea, 1 in Ethiopia, 1 in US). All in good health.

Physical Exam

- NAD, pleasant thin build man
- No thrush, no LAN, OP clear
- Sinus tachy, no m/r/g
- CTAB
- Testicles, penis wnl. Erythematous macular rash at groin.
- No ttp along spine. Points to mid-thoracic pain “inside” as location.
- No focal neuro deficits
- Besides groin Candida, no rashes or lesions throughout
- No edema

Labs

- RPR NR
- Toxo IgG+
- QFT neg
- HepA Ab+, HepBsAg-, HepBsAb+, HepBcAb+, HCV Ab-
Labs

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UA: 0-2 WBC, 0-2 RBC
1+protein, 3+ glucose

Albumin 3.9
Total protein 7.4

Initial Clinic Visit Plan

- AFB blood cx
- Stool studies (though said no diarrhea in last few weeks, given eosinophilia . . .)
- ECG (sinus tachy)
- CT A/P w contrast

Called by radiologist the next night . . .

1. Abnormal soft tissue thickening around the abdominal aorta. Hyperdense foci within the soft tissue.
2. A wedge shaped region of hypodensity in the posterior left kidney may represent a small infarct.
3. Splenomegaly.
Called patient to come in to get admitted . . .

Admission

- Vascular, ID, Rheum consultation
- CTA aorta:
  - Confirmed soft tissue mass anterior to IVC at level of IMA origin, small renal infarct and mild splenomegaly ~13 cm.
  - No evidence of pseudoaneurysm, or other acute aortic compromise.
- MRI chest:
  - No evidence of thoracic aortitis. No LAN. Heart size normal and no cardiac valvular dysfunction. 1.4 cm middle thoracic vertebral body lesion – possibly hemangioma.

Admission

- TTE:
  - Adequate
  - Sinus tachy 90-100 bpm.
  - LV normal thickness with grade I diastolic dysfunction.
  - Normal RV thickness and contractility. Trace AR.
  - Chordae of MV redundant but no pendant mass or prolapse. Trace MR.
  - No sonographic evidence for endocarditis.

Labs

- Micro:
  - Blood cxs ngtd
  - AFB blood– smear-, cx ngtd
  - Repeat RPR NR, TPPA inconclusive
  - Cocci CF and ID neg
  - CrAg neg
  - Histo Ab & Urine Histo Ag neg
**Labs**

- INR: 1.2
- PTT: 49.9
- 44% N, 34% L, 9% M, 5% E, 1% B
- ESR 45, hs-CRP 25.0
- LDH 230
- UA: 0-2 WBC, 0-2 RBC
- 1+ protein, 3+ glucose

**Hospital Discharge**

- FNA core biopsy of peri-aortic tissue performed by IR/Vascular
- Discharged home with pain meds, studies pending

**Differential Diagnosis**

- **Bacterial:**
  - salmonella
  - staph
  - strep
  - syphilis
- **Mycobacterial:**
  - TB
  - MAC
- **Fungal:**
  - Cocci
  - Histo
- **Malignancy:** lymphoma

**FNA Biopsy:**

“Occasional rod-like structures.” Rare AFB.
FNA Biopsy: “Occasional rod-like structures.” Rare AFB.

Initial Treatment Plan

- Started on empiric MAC/TB therapy
- Tissue cx’s x 3 ngtd, AFB smear neg
- Pain significantly improved (without pain meds)
- Path sent to UW for Molecular Diagnostics to determine TB vs MAC by PCR

UW Molecular Diagnostics

- But MAC and TB PCR negative . . .

Differential Diagnosis

- **Bacterial:**
  - salmonella
  - staph
  - strep
  - syphilis
- **Mycobacterial:**
  - TB
  - MAC
- **Fungal:**
  - Cocci
  - Histo
- **Malignancy:** lymphoma
UW Molecular Diagnostics

- Requested add on bacterial 16S and fungal 28S PCR since sample already set up . . .

Bartonella Studies

- Bartonella serologies
  - B. quintana IgG 1:1024, IgM <1:16
  - B. henslae IgG >1:1024, IgM <1:16

- Bartonella culture (UCSF Koehler lab)
  - Only ~1 cc pre-abx blood sample – no growth x 8 weeks

- Warthin-Starry stain:
  - Neg at SFGH, repeated and neg at Parnassus

DISCUSSION
**Infectious Aortitis**

- **Infectious:**
  - **Bacterial:**
    - Most commonly Salmonella, Staph, Strep
    - Preexisting pathology - e.g., plaque or aneurysmal sac
  - **Luetic:** Syphilis
    - Extremely rare. Typical involves ascending aorta, thoracic aortic aneurysm
      - Classic histology - “Tree barking” of aortic intima (chronic inflammatory infiltrate of medial and adventitial vaso vasorum → medial necrosis)
    - Can rarely be identified with Warthin-Starry stain
  - **Mycobacterial:** TB
    - Uncommon in developed world
    - Direct seeding of thoracic aorta from adjacent infected tissues – LNs, lung lesion, or miliary spread

**Infectious Aortitis Management**

- **Clinical presentation:** range from back pain, abd pain, fever
- **Diagnosis:** expedient imaging (CTA, MRA, PET)
- **Lab:** serologies, microbiol, path. ESR, CRP to follow
- **Prognosis:** case series show high mortality rate especially if GNR
- **Treatment:**
  - “Empiric abx as soon as suspect”
  - Recommend combination of intensive Abx, surgical debridement, aneurysmal repair
  - No optimal duration of abx but at least 6-12 weeks and clearance of blood cx recommended

**Bartonella**

- Small facultative intracellular bacteria that stain gram negative
- Very fastidious, slow-growing (difficult to culture!)
- Two most commonly known species, especially immunocompromised:
  - Bartonella henselae:
    - flea bites, cat bites/scratches
  - Bartonella quintana
    - lice infestation, homelessness

**Bartonella and Human Disease**

- 4 species are known to cause infection in humans
  - B. henselae, B. quintana, B. elizabethae, and B. bacilliformis
- **Immunocompromised Host:**
  - Relapsing bacteremia (BQ, BH)
  - Endocarditis (BQ, BE, *NOT BH*)
  - Bacillary peliosis hepatis (BH)
  - Bacillary angiomatosis: usu skin but also brain parenchyma, liver, spleen, bone, lymph nodes, and lung (BH, BQ) . . .

- **Up until this case no prior reported cases of Bartonella aortitis**
Bartonella Diagnosis

- Serum antibody (IFA or ELISA) test
  - IFA notorious for poorly diagnostic value of IgM
  - Not good at differentiating BH vs. BQ
  - Gold standard: CDC
    - 6+ month turnaround time!
    - Sensitivity ~90% but in HIV ~60%
- Blood culture in EDTA tube (low yield)
- Biopsy potential BA lesions
  - Tissue Warthin-Starry silver stain

**Collect special blood culture before antibiotics!!**

Bacillary angiomatosis in an AIDS patient

Bacillary peliosis hepatis in an AIDS patient

Warthin-Starry tissue silver stain of bacillary angiomatosis lesion


Courtesy of Jane Koehler
Bartonella Treatment

• **Endocarditis:**
  – Guidelines: *doxy* x 6 weeks + *gent* x 14 days

• **Chronic bacteremia** (homeless):
  – Guidelines: *doxy* x 4 weeks + *gent* x 14 days
  – RCT in homeless:
    • In 7/9 (78%) treated, bacteremia resolved
    • Only 2/11 (18%) untreated had resolution

• **Bacillary angiomatosis:**
  – Guidelines: *erythromycin* PO x 3 months
  – If contraindication to macrolides: *doxy* x 3 months

  *Do NOT recommend gent. Rifampin instead*

Rolain Antimicrobial Agents Chemother 2004

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Case Pearls

• **First pearl:** IFA test does not distinguish BQ/BH

• **Second pearl:** *Bartonella* IgM is NOT helpful

• **Third pearl:** BQ (not BH) hallmark is invasive internal and subcutaneous masses, and osteo

• **Fourth pearl:** azithro ppx + rif in RIPE Rx Bart
  – pt got better after RIPE started, before doxy

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Follow-Up

• Repeat CTA aorta 3 weeks after starting RIPE = **stable**

• ESR **29** (from 45), CRP **1.0** (from 25.0)

Follow-Up Studies

• AFB sputum x 2 ngtd, Gene Xpert neg TB
• AFB FNA cx – ngtd at 8 weeks

• Stool cx, microsporidia, and O&P neg

• Repeat TPPA neg

• Fungal blood cx ngtd
Patient Follow-Up

- Back pain resolved- never given additional pain meds post-discharge
- Refused TEE

Case 2

- 43 yo Caucasian MSM with HIV
  - CD4 = 1000, HIV RNA <40 on Atripla

  - CC:
    - Rectal and urethral discharge, hazy vision x 2 weeks

HPI

- 2 months prior:
  - Rectal swab + for CT → Rx with azithro x 1.
  - RPR 1:4 → 1:8 (per patient, possible syphilis exposure) → Bicillin x 1.

- 2 weeks prior: rectal and urethral discharge, rectal tenderness with some bleeding. Hazy vision x 4-5 days with photosensitivity. Reported recent unprotected sex.
  - Also c/o joint pain, notably in low back
ROS

- No fever, chills, night sweats, weight loss
- Vision changes: **looked like “smoke” everywhere, bright light “hurt”** such that had to go in dark area
- No tinnitus/hearing changes, no other neuro sx
- Anal and penile whitish discharge and rectal bleeding
- Joint pain: **vague lower back dull ache x 1-2 weeks, possibly MCP joints of bilat hands**
- No CP, SOB, cough, palpitations, thrush, dysuria, diarrhea, constipation, LAN, rashes, abd pain

PMH

- Acute Hep C (geno 1) dx 7/11→ cleared without therapy
- Acute HBV dx 7/11→ cleared without therapy
- HIV- dx 2/12 (likely acute HIV in 12/11 based on hx) – nadir 885, on Atripla since dx, VL UD since starting ARVs
- Syphilis multiple times (most recent 9 months prior s/p IM PCN x 3, with RPR 1:32 → 1:4)
- Chlamydia multiple times (most recent 2 months prior)
- Genital anal herpes - on Valacyclovir ppx
- R inguinal hernia – s/p surgery 2012
- Anxiety/Depression
- Chest pain: treadmill test neg 2/28/13, ECG and ECHO wnl. Improved after decreased anxiety at work

Meds

- Atripla QD
- Valacyclovir 500 mg bid

Social Hx

- Divorced, bi-sexual, married twice in past, has 4 children. Currently multiple male sex partners, reports “mostly” using condoms.
  - Tob 1-2 ppd currently, smoked since age 17 up to 3 ppd in the past.
  - No ETOH currently but at times ~3-4 hard liquor drinks/night, never ETOH WD sx/DT
  - Occasional MJ
  - No other substance abuse

NKDA
**Family Hx**

- Strong family hx of MI (mother and father both reportedly MIs in 40s)

**Physical Exam**

- Vitals: 37°C 83 133/86 96% RA
- Skin: Normal
- HEENT: non-dilated exam- conjunctiva and corneas wnl b/l
- Nodes: no LAN
- Chest: CTAB
- Heart: RRR no m/r/g
- Abdomen: soft NT ND +BS
- GU: Anus Normal, Rectum - DRE with mild tenderness, no bleeding, ulceration, masses.
- Neuro: no focal deficits except c/o blurry vision

**Labs**

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<tr>
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*RPR 1:4, TPPA pos*

GC/CT neg (throat, urine, rectal)

<table>
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<tr>
<th>0.4</th>
<th>Albumin 4.0</th>
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<tr>
<td>19</td>
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</tr>
<tr>
<td>128</td>
<td>Total protein 7.0</td>
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**What do you think is most likely dx?**

A. Herpes simplex virus
B. Treponema pallidum
C. Chlamydia trachomatis
D. Neisseria gonorrhoea
E. Haemophilus ducreyi
F. Non-infectious
What test would you order first?
A. Spine films
B. Eye exam
C. LP
D. HLA-B27
E. Rectal swab
F. Repeat RPR

Urgent Care Tests Performed
• LGV NAAT sent to DPH
• Ophthalmology evaluation
  – Bilateral anterior uveitis
  – Rx steroid drops

Differential diagnosis of uveitis
• Autoimmune
  – Ankylosing spondylitis
  – Behcet’s
  – IBD
  – Kawasaki
  – Psoriasis
  – Reactive arthritis
  – Rheumatoid arthritis
  – Sarcoidosis
• Infections:
  – Bacterial
  – Fungal
  – Viral
  – Parasitic
• Unknown
• Injury
Infectious Differential Diagnosis of Uveitis

- Bacterial
  - Atypical Mycobacterial
  - Bartonella
  - Brucella
  - Leptospirosis
  - Lyme
  - Syphilis
  - TB
- Fungal
  - Aspergillus
  - Blastomycosis
  - Candidiasis
  - Coccidiodomycosis
  - Histoplasmosis
  - Sporotrichosis
- Viral
  - CMV
  - EBV
  - HIV
  - HSV
  - Rubella
  - VZV
  - WNV
- Parasitic
  - Acanthamoeba
  - Cystercercosis
  - Toxocariasis
  - Toxoplasmosis

False Negative RPR

- Early primary syphilis (86%)
- Late syphilis due to decreased sensitivity (70%)
- Prozone phenomenon

Urgent Care

- Rx with ceftriaxone x 1 empiric GC Rx
- Rx doxycycline x 3 weeks for presumptive LGV

1 Week Later

- Patient reported complete resolution of eye pain with steroid gtt, some near vision difficulties
- No worsening HA, no tinnitus
- Repeat eye exam: resolving uveitis
- Patient reluctant to come in for LP
- Repeat RPR 1:4
2 Weeks Later

- Patient reported continued improving vision with topical steroids
- Reported unilateral tinnitus x several days, no decrease in hearing
- RPR repeated again, 1:4
- LGV NAAT from DPH came back positive

Fundoscopic Exam

- Ophthalmology exam:
  - New retinal vasculitis

What would you do next?

A. LP → if VDRL+ or WBCs → start IV PCN x 10d
B. No LP → start IV PCN x 10d
C. LP → start IV PCN x 10d
What do you think is most likely dx?

- Tinnitus + Posterior eye involvement
- Syphilis
- Syphilis
- Syphilis
- Syphilis

- LP!
- Start treatment for neurosyphilis

Admission

- Patient admitted for expedited work-up and treatment for ophthalmic syphilis

Admission

- Vitals: 36.6, 127/85, 106, 16, 97% RA
- GEN: NAD, thin
- HEENT: PERRL, OP clear, acuity 20/25 OD and 20/30 OS (baseline 20/20 OU)
- CV: Tachy, no g/r/m, JVP flat
- RESP: Clear to auscultation bilaterally
- ABD: NABS, soft, no TTP, no rebound or guarding
- Neuro: A/Ox3, CN II-XII intact, normal reflexes, normal gait, normal strength
- MSK: Normal extremities, no effusions, no synovitis
- Skin: No rashes or ulcerations

Admission

- CBC, chem panel, LFTs wnl
- CD4 931, VL UD

- CXR: clear
Hospital Work-Up

- LP:
  - 1 RBC
  - 2 WBC with 67% lymphs
  - Glucose 66
  - Protein 55
  - CSF VDRL was negative.
- RPR 1:4
- CTA head: no e/o vasculopathy
- ESR, CRP, ACE/lysozyme, wnl
- HLA-B27 neg
- CT A/P showed no e/o sacroilitis

Treatment

- IV PCN x 10 days
- Ophtho prescribed prednisolone and atropine eye drops
  - Vision continued to improve
  - No further tinnitus

Ophthalmic (Neuro) Syphilis

- Ophthalmic syphilis = Neurosyphilis! (CN II)
- Can occur at ANY stage of disease
- Uveitis is most common manifestation
  - Also keratitis, scleritis, posterior or panuveitis.
- Bilateral eye involvement is seen in about 50% of patients
- Ocular syphilis is often, but not always, accompanied by meningitis.
- Up to 30% of ophthalmic syphilis will have NEG CSF – treat for presumptive neurosyphilis if suspicion is high
Diagnosis

- A negative RPR does not exclude ocular syphilis
  - Tertiary syphilis is exceedingly rare – so overall, most patients will have +RPR or +VDRL... but
  - In > 50% of patients with eye disease due to tertiary syphilis, RPR is negative.

Variability of RPR and CSF Findings in Ophthalmic Syphilis among HIV+ Patients

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<th>Age</th>
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<td>1-128</td>
<td>NR</td>
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- Systematic review of case series and case reports of HIV+ patients with ocular syphilis
- 101 patients
- 3 cases with a negative serum RPR/VDRL were identified

Ophthalmic Syphilis in HIV

- Incidence of eye involvement in HIV is about 5-10%
- Ocular involvement regardless of CD4 count or ART
  - Balba, et al, 3/33 (9%) HIV+ART+ syphilis+ had ocular involvement.
    Mean CD4 count 408 with ocular involvement
    Mean CD4 count 476 for syphilis without ocular
- Prior to the HIV era, the prevalence of eye involvement in syphilis was reported to be 3%.
  - Marra, et al found a 6% rate of ocular involvement in current HAART era.
- Immune reconstitution does not seem to protect against syphilitic eye involvement
**Ophthalmic Syphilis in HIV**

- Untreated HIV+
  - Ocular involvement is more frequently **bilateral**
  - Tendency towards posterior involvement or *panuveitis*

- Among treated HIV+
  - Syphilis remains the primary infectious cause of uveitis

- *Remember to check HIV status in patients newly diagnosed with syphilis*


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**Outcomes for Ocular Syphilis in HIV**

- **Persistent symptoms are common but definitive improvement with therapy**

- Prospective study: 41 HIV+ neurosyphilis patients
  - 38% of cases sx persisted after 1 year

- Systematic analysis: 35 HIV+ ocular syphilis
  - 97% of the cases showed definitive improvement or normal visual acuity on follow-up.


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**Lymphogranuloma venereum**

- Chlamydia trachomatis
  - Serovars L1, L2, L3
  - Compared to other serotypes of CT (serovars D-K), more invasive and virulent, tending to result in systemic disease
  - Organism travels through lymphatics to multiply within macrophages in regional lymph nodes

  Vriese Sex Transm Infect 2013

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**Posterior Uveitis and Panuveitis, Bilateral Most Common among HIV+ Ocular Syphilis**

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<th>CD4 count &lt; 200 cells/μL</th>
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<td>Median (CD4 count, cells/μL)</td>
<td>501 (204–1400)</td>
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<td>CD4 (%)</td>
<td>74</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>200 (CD4 &lt; 50) (%)</td>
<td>7</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>CD4 &lt; 50 (%)</td>
<td>10</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Median (HIV RNA, log copies/ml)</td>
<td>1000 (CB copies–1.0–1.9 million copies)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ocular findings</td>
<td>n = 86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bilateral (%)</td>
<td>63</td>
<td>56</td>
<td>0.10</td>
</tr>
<tr>
<td>Anterior uveitis (%)</td>
<td>17</td>
<td>6</td>
<td>0.10</td>
</tr>
<tr>
<td>Posterior uveitis (%)</td>
<td>54</td>
<td>56</td>
<td>0.90</td>
</tr>
<tr>
<td>Papilled (%)</td>
<td>20</td>
<td>0</td>
<td>0.003</td>
</tr>
<tr>
<td>Disc hemorrhage (%)</td>
<td>25</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Clinical manifestations</td>
<td>n = 54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deep visual symptoms (%)</td>
<td>39</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Risk of secondary syphilis (%)</td>
<td>36</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>CSF finding</td>
<td>n = 64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBC elevated (%)</td>
<td>26</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>Total protein elevated (%)</td>
<td>75</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>RBC protein (%)</td>
<td>37</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>

Tucker Sex Transm Infect 2011
LGV Epidemiology

- Transmission – primarily sexual
- Endemic is some regions, in 2000’s outbreaks reported in MSM in Europe, primarily proctitis
  - Higher prevalence in HIV+
- Reservoir not defined, ? presence of asymptomatic carrier state

LGV Clinical Manifestations

- Inguinal:
  - Acute: short-lived, usually PAINLESS ulcer with PAINFUL inguinal LAN. “Groove sign” huge nodes below and above inguinal ligament.
  - Chronic: fibrosis, elephantitis (LN don’t drain)
- Anorectal:
  - Acute: cramps, pain, bloody discharge, constipation (can mistake for IBD on bx!)
  - Chronic: irreversible anorectal strictures → soiling, pain, constipation, megacolon

LGV Proctitis

Signs
- diffuse friability
- discrete ulceration

Symptoms
- rectal pain
- bleeding

LGV Diagnosis

- Routine NAATs do NOT distinguish between D-K and L1-L3!
- PCR to identify LGV
- Or Serologic testing:
  - Single IgM >1:64 or
  - Single IgG >1:256 are positive for invasive disease (GENITAL but may be able to assume these are ok cutoffs for RECTAL, too).
SFDPH LGV Diagnostic Testing

- LGV NAAT available via SFDPH
- Test performed at SFPDH q2 weeks (batch requests)
- Only rectal specimens accepted
- Since test is batched, may not be able to use it to guide clinical management in real time.
  - *LGV proctitis is a CLINICAL diagnosis → empiric Rx in any MSM with bloody proctitis.*
  - **NOTE:**
    - *Neg LGV NAAT does not r/o LGV*

LGV Treatment

- Treatment options:
  - Doxycycline 100mg PO bid x 3 weeks or
  - Azithro 1g PO qweek x 3 weeks

- Treat asymptomatic partners in past 60 day for chlamydia (do not need extended course)

Chlamydia-Associated Reactive Arthritis

Previously "Reiter’s Syndrome"
Occurs 3-6 weeks after genital infection
May recur without reinfection
Affects males > females, esp. HLA B27
Clinical constellation:
- Urethritis
- Conjunctivitis
- Oligoarthritis
- Skin lesions
- "can’t see, pee or climb a tree"
- CT antigens & DNA can be present in joints

Reactive Arthritis following CT Conjunctivitis

Slide courtesy of Susan Philips
Reactive Arthritis –
Oligoarthritis

Red swollen third toe
Typically swelling and tenderness in multiple joints

Reactive Arthritis
Circinate Balanitis

• Red weeping
macular patch

Follow-up

• Pt continued to be followed in Ophtho clinic
• Retinal vasculitis continued to improve; vision 20/30 bilaterally (prior was 20/20 bilaterally)
• No further joint symptoms
• Repeat RPR 1:2

Conclusions

SYPHILIS

• Syphilis can produce almost any ocular manifestation
  – Ocular syphilis = Neurosyphilis
• Ocular involvement may be more common in HIV+
  – All HIV+ pts with c/f syphilis and eye sx should get an eye exam
  – LP should be performed
  – But treat regardless of CSF findings!
• Immune reconstitution with ART does not protect against syphilitic ocular involvement

LGV

• LGV is a clinical diagnosis!
  – Empirically treat for LGV in any MSM with bloody proctitis
• Send rectal swab NAAT but proceed to treat with 3 weeks doxy
  – Do not wait for NAAT results
Acknowledgments

• Jane Koehler (Bartonella slides)
• Susan Phillip (LGV slides)

THANK YOU!