Overview

General Pearls

- MKSAP questions (too much HIV, somewhat more difficult)
- No material from less than 1 year ago
- No drug doses
- No controversies (HIV)
- Always get blood cultures
- Always get biopsies and pathology to assist when you can
- ID folks like imaging
Agenda

Clinical Syndromes
Immunocompromised
HIV
Potpourri
Case #1:

A 21 year-old man comes to the ED at 9AM with a painful, throbbing right hand since awakening. He says that he had been in a fight outside of a bar the preceding night.

After punching another patron in the mouth, he noted a small cut over his third knuckle, which he washed with soap and water.

Exam: Afebrile.
1cm laceration over the third MCP joint, swelling on the dorsal aspect of the hand, and painful flexion/extension of the digits.
No discharge.
He reports he had received a tetanus booster 3yrs ago after a similar episode.

Hand X-ray: No fracture.
You obtain cultures, irrigate and clean the wound with saline and povidone-iodine.
Case #1:
Which treatment plan is most appropriate?

A. Amoxicillin/clavulanate. Tell patient to return to ED if symptoms do not improve.
B. Clindamycin. Tell patient to return to ED if symptoms do not improve.
C. Ampicillin/sulbactam. Admit patient; elevate/immobilize hand.
D. Ampicillin/sulbactam. Admit patient; elevate/immobilize hand, give tetanus booster.
E. Ampicillin/sulbactam. Admit patient; elevate/immobilize hand, consult a hand surgeon.
Case #1:
Which treatment plan is most appropriate?
A. Amoxicillin/clavulanate. Tell patient to return to ED if symptoms do not improve.
B. Clindamycin. Tell patient to return to ED if symptoms do not improve.
C. Ampicillin/sulbactam. Admit patient; elevate/immobilize hand.
D. Ampicillin/sulbactam. Admit patient; elevate/immobilize hand, give tetanus booster.
E. **Ampicillin/sulbactam. Admit patient; elevate/immobilize hand, consult a hand surgeon.**

Skin & Soft Tissue and Bone
Bite wounds – Microbiology

**Dog**
- 10% infected, superficial
- Pasteurella, S. aureus, anaerobes, Capnocytophaga

**Cat**
- >50% infected, deep
- Pasteurella (rapid pain/swelling in <24h)

**Human**
- >20% infected, more in hand injuries
- Strep viridans, Group A strep, Staph epi, Staph aureus, anaerobes, Eikenella
Skin & Soft Tissue and Bone

Bite wounds – Management

Prophylaxis
• 3-5 day course antibiotics if: Severe injury, <8h old, bone/joint/tendon penetration, hand wounds, genital wounds, immunocompromised host

Empiric treatment
• Mild/mod infection: PO amox/clav (Augmentin) or clinda/cipro
• Severe/hospitalized: IV amp/sulb (Unasyn), pip/tazo (Zosyn) or clinda/cipro

Skin & Soft Tissue and Bone

Bite wounds – Post-exposure prophylaxis

Hepatitis B, Hepatitis C, HIV
• Needle stick transmission rates (rule of 3’s)
• HBV 30%, HCV 3%, HIV 0.3%.

Tetanus
• Previously immunized: Booster shot if >5yr ago for dirty wound, or >10yr for minor wound.
• Not immunized or unsure: Vaccinate and add tetanus IG if dirty, deep wound
Skin & Soft Tissue and Bone
Necrotizing fasciitis

Definition: Extensive destruction of fascia and fat, but may spare the skin

Organism: Streptococcus A, mixed in other cases

Treatment:
• Surgical I & D
• Hemodynamic support
• Antibiotics (zosyn + clindamycin +/- vancomycin)

Skin & Soft Tissue and Bone
Toxic Shock Syndrome

• Staph aureus and group A streptococci
• Diffuse, macular, erythematous rash; desquamation on recovery
• Fever, hypotension, organ failure

• Rx: Fluids, antibiotics, IVIG in selected pts, remove source of toxin if possible (tampon)
GAS Rheumatic fever
Major J♥NES criteria

- J Joints
- ♥ Heart
- N Nodules
- E Erythema marginatum
- S Sydenham’s chorea

Erythema marginatum
Case # 2:
A 22 year-old woman presents to Urgent Care with 2 days of malaise, chills, swelling in her R knee and decreased mobility in her wrists and knee.
She noted some aches in her wrists and ankles 5d ago, the ankle symptoms have since resolved.
She denies IDU, and is monogamous with her boyfriend of 6 months.
She hiked in New England 1mo ago and removed a tick at the end of the day.

Case # 2:
Exam: T 38.3 ° BP 128/82  HR 96.
Extremities: Some bogginess over the wrists with limited flexion.
R knee: Swollen, warm, and a small effusion is present.
Skin: Multiple (~15) red papules, some pustular, over her lower extremities.

Labs: WBC 15K  Hct 32  Platelets 440.
R knee arthrocentesis: WBCs but no crystals.
Case #2:

What is your next step?

A. Start pip/tazo (Zosyn) IV
B. Start empiric intraarticular antibiotics
C. Obtain culture of the skin lesions, blood and all orifices
D. Await joint fluid gram stain – if no organisms, start nafcillin and gentamicin
E. Order Lyme serologies and await results before treating
Clinical Syndromes
STDs: Disseminated GC

Disseminated Gonococcal Infection

• “Arthritis-dermatitis syndrome”
• Fever, chills, skin lesions, tenosynovitis, polyarticular.
• Rash in 2/3 of pts, ≤30 lesions, on extremities, petechiae/papules → vesicles/pustules (hemorrhagic)
• Lasts 3-4d.

Clinical Syndromes
STDs: Disseminated GC

Dx: Blood Cx +ve, joint fluid usually –ve. Genital/rectal/pharyngeal and lesion Cx’s sometimes +ve.

Culturing all sites increases yield>80%.

Predisposed if:
Complement deficiency (like N. meningitidis) – check CH50 if recurs.

Treatment: Ceftriaxone IV then PO cefixime or cipro x 7-10d course
Clinical Syndromes

Acute monoarticular arthritis

Differential Dx:
- Any age: Staph aureus, Streptococci (A,B,C,G)
- **Young, sexually active:** *Neisseria gonorrhoeae*
- Older, debilitated, immunosuppressed, prior joint disease: Gram negative rods
- Many (>100) skin lesions: *Neisseria meningitidis*
- IVDU: Staph, Pseudomonas (esp. sternoclavicular, sacroiliac)
- Gout/Pseudogout
- Rheumatoid arthritis
- Trauma

Clinical Syndromes

1,2,3 Infectious Causes of Polyarticular arthritis

“1 gonorrheal, 2 spirochetal and 3 viral”

1 *gonorrheal:* disseminated GC

2 *spirochetal:*
  - Lyme Disease
  - Secondary Syphilis

3 *viral*
  - HIV
  - Hepatitis B
  - Parvovirus
### Clinical Syndromes

#### Joint Fluid Analysis

<table>
<thead>
<tr>
<th></th>
<th>Normal</th>
<th>Non-inflammatory</th>
<th>Inflammatory</th>
<th>Septic</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBC/mm³</td>
<td>&lt;200</td>
<td>200-10K</td>
<td>10K-100K</td>
<td>&gt;100K</td>
</tr>
<tr>
<td>%PMN</td>
<td>&lt;25%</td>
<td>&lt;25%</td>
<td>50%-90%</td>
<td>50%-100%</td>
</tr>
<tr>
<td>Examples</td>
<td>DJD, trauma</td>
<td>TB, collagen-vascular, gout</td>
<td>S. aureus</td>
<td></td>
</tr>
</tbody>
</table>

#### Septic arthritis

**Management:**

- **Arthrocentesis**
  - For diagnosis (and treatment) at presentation
  - Consider repeat tap if effusion recurs in 5-7d
  - In S. aureus, repeated taps are mandatory

- **Antibiotics IV**
  - Target suspected organisms – often ceftriaxone, nafcillin empirically.
  - Course is 2-3 wks (longer for S. aureus).

- **Surgical drainage**
  - If effusion persists >7d
Case # 3:

A 36yo man presents at your office c/o a lesion on his penis and worsening rash on his chest and abdomen x3d.

He reports 1 week of malaise, anorexia and sore throat.

He is sexually active with men only, and had an unprotected encounter 1mo ago. He had negative VDRL/HIV tests 8mo ago.

Case # 3:

Exam: T 38.3°C  BP 135/80  HR 88  Wt 80kg.
HEENT: No oral/buccal lesions.
LAN: Axillary and epitrochlear nodes bilaterally.
Skin: Discrete 3-10mm nontender reddish macules, some raised, scattered over the trunk and thighs. No lesions on the palms or soles.
GU: One grayish ~2cm plaque, nontender, with a moist base on the scrotum.
A stat VDRL titer is 1:16.
Repeat HIV test results pending.
Case # 3:

How do you treat him?

A. Benzathine Penicillin G 2.4MU IM x1; tell pt to return if symptoms recur
B. Benzathine Penicillin G 2.4MU IM x1; tell patient to return in 3-6mo
C. Benzathine Penicillin G 2.4MU IM x3 now, in 1 and 2 weeks
D. Aqueous Penincillin G 3MU IV q4h x10 d
E. Erythromycin 400mg IV q6h x10d
Clinical Syndromes
STDs: Secondary Syphilis

- A few weeks to 6 months after development of chancre
- Generalized maculopapular skin rash
- Mucus membrane lesions
- Fever
- Many treponemes in mucus membrane lesions
- Rx benzathine PCN IM x 1 as for primary syphilis; follow titer

Clinical Syndromes
STDs: Syphilis Timeline

Untreated syphilis may pass through 5 stages but think in terms of EARLY and LATE disease

**EARLY**
- 1. Primary syphilis (month 1)
- 2. Secondary syphilis (month 2)
- 3. “Early latent” (months 3-12)

**LATE**
- 4. “Late latent” (months 13-....)
- 5. Tertiary syphilis (months 13- up to year 30)
There was a young man from Back Bay
Who thought syphilis just went away
He believed that a chancre
Was only a canker
That healed in a week and a day.
But now he has acne vulgaris –
(Or whatever they call it in Paris);
On his skin it has spread
From his feet to his head,
And his friends want to know where his
hair is.
There’s more to his terrible plight:
His pupils won’t close in the light
His heart is cavorting,
His wife is aborting,
And he squints through his gunbarrel
sight.
Arthralgia cuts into his slumber;
His aorta is in need of a plumber;
But now he has tabes,
And sabershinned babies,
While of gummas he has quite a
number.
He’s been treated in every known way,
But his spirochetes grow day by day;
He’s developed paresis,
Has long talks with Jesus,
And thinks he’s the Queen of the May.
Clinical Syndromes

STDs: EARLY: 2. Secondary syphilis (month 2)

Clinical Syndromes

STDs: LATE: 5. Tertiary syphilis
Clinical Syndromes
STDs: Syphilis treatment and follow-up

Treatment:
- **Early** syphilis: Benzathine PCN G 2.4MU IM x1, or Doxy or Ceftriaxone
- **Late** syphilis: Benzathine PCN G 2.4MU IM qwk x3, or Doxy
- Pregnancy: only PCN (no Doxy with fetus, failures with Erythromycin)
- Neurosyphilis: PCN G 3MU q4h IV x10-14d

Follow-up:
- Repeat RPR at 3, 6, 12, 24 months
- Retreat if clinical signs persist or recur, high titer doesn’t ↓, 4-fold ↑ in titer

Clinical Syndromes
Vaginal discharge

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Diagnostic Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacterial vaginosis</td>
<td>1. PH &gt; 4.5 2. Wet prep: Clue cells 3. Positive “whiff” 4. Thin white discharge</td>
</tr>
<tr>
<td>Rx: Flagyl</td>
<td></td>
</tr>
<tr>
<td>Candida</td>
<td>KOH prep: Hyphae or budding spores</td>
</tr>
<tr>
<td>Rx: Clotrimazole vs Fluconazole</td>
<td></td>
</tr>
<tr>
<td>Trichomonas</td>
<td>Wet prep: Motile trichomonads</td>
</tr>
<tr>
<td>Rx: Flagyl</td>
<td></td>
</tr>
<tr>
<td>Treat the partner</td>
<td></td>
</tr>
</tbody>
</table>
Agenda

Clinical Syndromes (with questions)
Immunocompromised
HIV
Potpourri
Immunocompromised
Complement Deficiency

• The only known host defense defects associated with a terminal complement component deficiency are meningococcal disease and disseminated gonococcal disease

• Check CH50

Case # 4:

A 38-year-old African-American female financial analyst is referred to you for asthma exacerbation.

She reports shortness of breath with frequent expectoration of brownish plugs. Albuterol inhalers are only minimally helpful. She has had hemoptysis in the past.

Temperature is 38.3°C. Chest with minimal wheezing. Her serum total IgE > 1000 ng/ml, she has a twofold elevation in specific anti-Aspergillus fumigatus IgE and IgG.
Case # 4:

Which of the following should you recommend?

A. Albuterol nebulizers every six hours
B. Prednisone taper over 3-6 months
C. Voriconazole
D. Itraconazole
**Immunocompromised**

**Aspergillus**

- Allergic Bronchopulmonary Aspergillosis (ABPA).
  - **Rx:** Steroids ± itraconazole

- Pulmonary Aspergilloma.
  - **Rx:** Surgery ± itraconazole

- Invasive Aspergillosis.
  - **Rx:** Voriconazole or caspofungin or amphoB or itraconazole sol or IV.

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**Case # 5:**

Which of the following is the recommended central line management in a patient with candidemia?

A. Change all central lines regardless of follow-up blood culture results. Use all new sites.

B. Change all central lines only if the patient is persistently fungemic. Use all new sites.

C. Change all central lines regardless of follow-up blood culture results. Change over a guide-wire OK.

D. Change all central lines only if the patient is persistently fungemic. Change over a guide-wire OK.
Case # 5:
Which of the following is the recommended central line management in a patient with candidemia?

A. **Change all central lines regardless of follow-up blood culture results. Use all new sites.**
B. Change all central lines only if the patient is persistently fungemic. Use all new sites.
C. Change all central lines regardless of follow-up blood culture results. Change over a guide-wire OK.
D. Change all central lines only if the patient is persistently fungemic. Change over a guide-wire OK.

**Immunocompromised Candida: Approach to patients with candidemia**

- How sick is the patient?
- Start AmB IV (or caspofungin or voriconazole)
- If organism is germ-tube positive (C. albicans), fluconazole IV OK
- If organism is not germ-tube positive continue AmB until spp known
**Immunocompromised**

*Candida: Approach to patients with candidemia*

- **Change lines**
- Eye exams and abdominal CT in selected patients
- **Diagnostic tests:**
  - Blood cx 50% sensitive
  - Think of risk factors (broad spectrum abx, TPN, lines)

---

**Immunocompromised**

*HSV: Diagnosis and Treatment*

- Stomatitis, genital disease, Bell's palsy, **encephalitis**.
- **Dx:** HSV PCR, direct fluorescent antibody (DFA)
- **Rx:** Acyclovir IV, famciclovir PO, valacyclovir PO
- Think of acyclovir resistant HSV in large ulcer in HIV pt → Foscarnet
- **Primary vs suppression rx**
**Immunocompromised**

**VZV: Treatment**

Varicella (chickenpox) in immunocompetent child: Rx not recommended

Varicella in immunocompetent adolescents: Acyclovir PO x 7 days. Start within 72 hours of rash

Varicella in immunocompromised host: IV acyclovir* or PO valacyclovir

*if ophthalmic/disseminated disease, opportunistic infections, organ transplant rejection

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**Immunocompromised**

**VZV: Prophylaxis**

Post-exposure prophylaxis only if immunocompromised or pregnant:

VZIG if <3 days.

If rash, IV acyclovir* or PO valacyclovir

Immunize non-immunocompromised contacts

*if ophthalmic/disseminated disease, opportunistic infections, organ transplant rejection
Immunocompromised

Febrile Neutropenia

- ≥T 38.3°C, neutrophils <500 cells/mm³, usually cancer chemotherapy in preceding 7-10 days.

- Treatment: Empiric broad-spectrum antibiotics. Cefepime, imipenem, +/- aminoglycoside, +/- vancomycin.

- Still neutropenic and febrile after 5 days: add antifungal agent (e.g. ampho B or caspofungin).

Agenda

Clinical Syndromes (with questions)
- Immunocompromised
- HIV
- Potpourri
“There was NO HIV. I could hardly believe it, but it’s true. The only time HIV came up was on ethics questions”

ABIM Boards taker 2003

HIV
Acute HIV

• 1-6 weeks after HIV infection
• Fever, rash, headache, myalgias, nausea, diarrhea, pharyngitis
• p24 antigen test can be diagnostic but less sensitive than viral load
• Viral load helpful if >10,000 copies/ml
• HIV serology (ELISA) for antibodies usually positive after 2-6 weeks of infection
• Detuned assay if HIV antibodies positive to check whether early HIV
HIV
HAART

1. When to start?
   • Too controversial, definitely with CD4<200 or with symptoms

2. What to start with?
   • 2 NRTIs + 1 PI or 2 NRTIs + 1 NNRTI
   • Antagonistic: AZT + d4T

3. When to change?
   • Too controversial

4. When to stop?
   • Too controversial

---

**HIV HAART Toxicity**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Adverse effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>AZT</td>
<td>Anemia, hepatitis</td>
</tr>
<tr>
<td>d4T and other “d” drugs</td>
<td>Pancreatitis, Neuropathy, mitochondrial toxicity &amp; lactic acidosis</td>
</tr>
<tr>
<td>Abacavir</td>
<td>Life threatening rash if restarted</td>
</tr>
<tr>
<td>Efavirenz</td>
<td>CNS, not safe in pregnancy</td>
</tr>
<tr>
<td>Nevirapine</td>
<td>Rash, Liver</td>
</tr>
</tbody>
</table>
### HIV

**HAART Toxicity**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Adverse effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ritonavir</td>
<td>Lots of drug interactions</td>
</tr>
<tr>
<td>Indinavir</td>
<td>Stones</td>
</tr>
<tr>
<td>Nelfinavir</td>
<td>Diarrhea</td>
</tr>
<tr>
<td>All PIs</td>
<td><strong>Lipodystrophy</strong>, other metabolic changes: DM, lipids</td>
</tr>
</tbody>
</table>

**Case # 6:**

A 41-year-old HIV-positive man presents at your office c/o fever and cough x 1 week.

His CD4+ Tcell count is 200 cells/ul with HIV plasma RNA<75 copies/ml on HAART.

Temperature is 38.6°C. Oxygen saturation on room air is 90% by pulse oximetry. Chest radiograph shows diffuse pulmonary infiltrates.
Case # 6:

Which of the following is the most likely causative organism?

A. *Mycobacterium tuberculosis*
B. *Staphylococcus aureus*
C. *Pneumocystis carinii (jiroveci)*
D. *Streptococcus pneumoniae*
E. *Mycoplasma pneumoniae*
<table>
<thead>
<tr>
<th>Case # 7:</th>
<th>Infection with which of the following is associated with Kaposi’s sarcoma?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A. HHV-8</td>
</tr>
<tr>
<td></td>
<td>B. HPV</td>
</tr>
<tr>
<td></td>
<td>C. HTLV</td>
</tr>
<tr>
<td></td>
<td>D. EBV</td>
</tr>
<tr>
<td></td>
<td>E. JC</td>
</tr>
</tbody>
</table>
# HIV

## Opportunistic Infections

<table>
<thead>
<tr>
<th>CD4 Count (cells/μl)</th>
<th>Infections</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;500</td>
<td>Bacterial pneumonia, TB, Candidia HSV, VZV Lymphoma, KS</td>
</tr>
<tr>
<td>&lt;200</td>
<td>PCP, Toxo, Cryptococcus, Coccidioidomycosis</td>
</tr>
<tr>
<td>&lt;100</td>
<td>MAC, CMV retinitis, CNS Lymphoma (primary), Bacillary Angiomatosis, Histoplasmosis</td>
</tr>
</tbody>
</table>

## Opportunistic Infections: Prophylaxis

<table>
<thead>
<tr>
<th>CD4 Count (cells/μl)</th>
<th>Prophylaxis</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;200</td>
<td>Septra, Dapsone, Atovaquone (PCP); Septra, Pyrimethamine/ Dapsone (Toxo)</td>
</tr>
<tr>
<td>&lt;100</td>
<td>Azithromycin, Clarithromycin (MAC)</td>
</tr>
</tbody>
</table>
Agenda

Clinical Syndromes (with questions)
Immunocompromised
HIV
Potpourri

“The boards had Lyme Disease up the wazoo.”¹

¹ JH, ABIM boards taker 2002
Potpourri
Spirochetes: Lyme Disease Pearls

• Ticks must feed for 24° to transmit infection

• Lyme disease prophylaxis and vaccine too controversial for exam

• Think of stages like syphilis (spirochete)
  • Early localized
  • Early disseminated
  • Late persistent

Potpourri
Spirochetes: Lyme Disease Pearls

• Early localized: 1 week; ECM rash; flu-like sx; doxy 100 BID x 2-3 wks

• Early disseminated: weeks; CNS, Bell’s palsy, joints, heart, myalgias, fatigue skin; doxy po x 4 wks; CTX IV if more severe (CNS)

• Late persistent: months to years; lot of arthritis, tenosynovitis; CNS memory loss; same rx
Potpourri
Parvovirus B19

**Kids:** “slapped-cheek”, “fifth disease”
  - Rx: nothing

**Adults:** symmetric polyarthritis, mimics SLE and RA; PIP joints
  - Dx: serology
  - Rx: NSAIDs

**Immunosuppressed:** red cell hypoplasia
  - Dx: serum PCR, ↓retics, bone marrow bx
  - Rx: IVIG, transfusions

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Potpourri Quiz 1

- Midwest, SE USA; Central and South America

- Lung (most common), dissemination to skin (like basal cell CA), bones
Potpourri Quiz 1

1. Blastomycosis
2. Sporotricosis
3. Histoplasmosis
4. Aspergillosis
5. Coccidioidomycosis
6. Cryptococcosis
7. Mucormycosis

Potpourri Quiz 1

1. **Blastomycosis**
2. Sporotricosis
3. Histoplasmosis
4. Aspergillosis
5. Coccidioidomycosis
6. Cryptococcosis
7. Mucormycosis
Potpourri Quiz 2

- Ohio and Mississippi River Valleys; Central and South America
- Bird and bat droppings
- Lung (most common), dissemination, hepatosplenomegaly, oral ulcers...

Potpourri Quiz 2

1. Blastomycosis
2. Sporotricosis
3. Histoplasmosis
4. Aspergillosis
5. Coccidioidomycosis
6. Cryptococcosis
7. Mucormycosis
Potpourri Quiz 2

1. Blastomycosis
2. Sporotricosis
3. **Histoplasmosis**
4. Aspergillosis
5. Coccidioidomycosis
6. Cryptococcosis
7. Mucormycosis

Potpourri Quiz 3

- Southwest USA, Mexico, Central and South America
- Flu-like illness, lung, dissemination to CNS (meningitis), bone, skin
- Erythema nodosum common…
Potpourri Quiz 3

1. Blastomycosis
2. Sporotricosis
3. Histoplasmosis
4. Aspergillosis
5. Coccidioidomycosis
6. Cryptococcosis
7. Mucormycosis
Potpourri Quiz 4

- Worldwide
- Contact with soil or decaying wood; gardening
- Begins as a hard nontender subcutaneous nodule then more nodules along lymphatics; can disseminate...
Potpourri Quiz 4

1. Blastomycosis
2. Sporotricosis
3. Histoplasmosis
4. Aspergillosis
5. Coccidioidomycosis
6. Cryptococcosis
7. Mucormycosis
Potpourri Quiz 5

• Worldwide
• Soil and dried pigeon dung
• Lung, dissemination in immunocompromised hosts (skin, CNS); most common cause of fungal meningitis...

Potpourri Quiz 5

1. Blastomycosis
2. Sporotricosis
3. Histoplasmosis
4. Aspergillosis
5. Coccidioidomycosis
6. Cryptococcosis
7. Mucormycosis
Potpourri Quiz 5

1. Blastomycosis
2. Sporotricosis
3. Histoplasmosis
4. Aspergillosis
5. Coccidioidomycosis
6. **Cryptococcus**
7. Mucormycosis

Potpourri Quiz 6

- Patient with DKA, renal failure, immunosuppressed
- Black necrotic lesions of nose with invasion
- Broad, branching, non-septate hyphae
- Almost 100% mortality in immunosuppressed
- Rx: Surgery and Ampho
Potpourri Quiz 6

1. Blastomycosis
2. Sporotricosis
3. Histoplasmosis
4. Aspergillosis
5. Coccidioidomycosis
6. Cryptococcosis
7. Mucormycosis

7. Mucormycosis
Case # 8:

A 56-year-old construction worker presents at your office c/o cough x 1 month.

He reports that two weeks ago he had URI symptoms including fevers and cough but the cough persisted; in fact, it seems to be getting worse. He occasionally vomits following the coughing spells. Medical history is unremarkable.

The patient is afebrile. He is tired appearing but does not seem acutely ill.

Case # 8:

Which of the following is the most appropriate management?

A. Albuterol inhaler every six hours
B. Pseudoephedrine 60mg PO q4-6h
C. Azithromycin 500mg PO on day 1, followed by 250mg PO daily for days 2-5
D. Reassurance
Case # 8:

Which of the following is the most appropriate management?

A. Albuterol inhaler every six hours
B. Pseudoephedrine 60mg PO q4-6h
C. **Azithromycin 500mg PO on day 1, followed by 250mg PO daily for days 2-5**
D. Reassurance

Pertussis

**Diagnosis:** clinical, culture/PCR if within 4 weeks; serology >4 weeks

**Treatment:** azithromycin X 5 days; erythromycin X 7 days; or TMP/SMZ X 14 days.

**Vaccine:** dTaP booster for 11-18 year olds; 19-64 year olds
### Immunizations

<table>
<thead>
<tr>
<th>Live attenuated</th>
<th>Other (HIV, pregnant OK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measles (MMR)</td>
<td>IPV (inactivated polio, IM)</td>
</tr>
<tr>
<td>Polio (Oral)</td>
<td>Typhoid (IM)</td>
</tr>
<tr>
<td>Yellow Fever</td>
<td>Cholera (IM); poor vaccine</td>
</tr>
<tr>
<td>Typhoid (Oral)</td>
<td>Hep A, B</td>
</tr>
<tr>
<td>Cholera (Oral); not in US</td>
<td>Influenza, Pneumovax</td>
</tr>
<tr>
<td>Flumist (nasal flu vaccine)</td>
<td>dT</td>
</tr>
<tr>
<td>VZV (varicella)</td>
<td>Meningococcal (not B)</td>
</tr>
<tr>
<td>VZV (zoster)</td>
<td>Rabies</td>
</tr>
</tbody>
</table>

### Answers to Cases:

**Case #:**
1. E – Clenched fist injury
2. C – Non-resolving pneumonia
3. C – Disseminated gonococcal infection
4. B – Secondary syphilis
5. B – Allergic bronchopulmonary aspergillosis
6. A – Line management during candidemia
7. D – Pneumococcus
8. A – Viral causes of malignancy
9. C – Pertussis
Answers to Potpourri Quiz:

Quiz #:
1. Blastomycosis
2. Histoplasmosis
3. Coccidioidomycosis
4. Sporotrichosis
5. Cryptococcosis
6. Mucormycosis

Agenda

Clinical Syndromes
   Skin and soft-tissue infections
   Sexually Transmitted Infections

Immunocompromised
HIV
Potpourri
   Lyme Disease
   Endemic mycoses

Earlier…
   Endocarditis, UTIs, Pneumonia, Infection Control,
   Travel Medicine, other tick bites, Meningitis
Good luck

Questions?