FASH FACTS:
ROLE OF ULTRASOUND IN MANAGEMENT OF HIV AND TB COINFECTIONS

DANIEL KAMINSTEIN, MD, DTM&H, FACEP

DISCLOSURE

- No financial conflicts of interest to disclose

CASE 1

- 24 yo female known HIV positive presents with increasing SOB
- HR 120, BP 80/40, 90% RA, Temp 37.5
- Unable to hear either heart or lung sounds despite pt being very thin. She is in significant distress and unable to lay flat
Day 2 after 2L pericardiocentesis

**TB PERICARDIAL EFFUSION**

- Easy to identify by ultrasound
- Ultrasound can help to direct needle drainage
CASE 2

- 27 yo female with hx of HIV presents with increasing cough, SOB, significant JVD
- HR 105, BP 110/70, RR 14, Temp 37.9, O2 sat 92% on RA
- Pronounced friction rub

GOALS

- Discuss some of other applications of ultrasound for HIV/TB beyond the traditional use of evaluating for pericardial effusion
- Case based format
HOW CAN ULTRASOUND HELP

- Pulmonary TB
- Extrapulmonary TB
  - TB lymphadenitis
- Renal TB
- Abdominal TB
- Ocular TB
- Pott's Disease
- Psoas Abscess

- Other HIV complications
  - Kaposi's
  - HIV nephropathy
  - PCP
  - Lymphoma
CASE 3

51 yo female with known hx of HIV with CD4 count of 4 on Atripla
Diagnosed with PTB last month based on X-ray
Presents with HA and confusion x 1 week.
Diarrhea for 2 weeks
No vomiting
BP 100/70 HR 102 RR 30 sats 92%
CV - normal
Lungs - Normal
Hepatomegaly
• Peri-Aortic lymph nodes
• Ascites
• Splenic lesions
CASE 3

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Sonographic findings in abdominal TB patients (N=30)</th>
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<tbody>
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<td>n</td>
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<td>Lymph nodes only</td>
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<td>Splenic lesions and ascites</td>
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<tr>
<td>Lymph nodes and ascites</td>
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<tr>
<td>Lymph nodes and splenic lesions</td>
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<td>Lymph nodes and splenic lesions and ascites</td>
<td>10</td>
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CI, confidence interval.

CASE 4

- 8 yo male presented with increasing abdominal swelling and abdominal pain.
- Completed a course of anti TB several months ago but still having some SOB.
- Suspected to be HIV positive
- Abd distended with palpable spleen on exam and some cervical lymphadenopathy.
- Afebrile stable vitals
CASE 4 - SUSPECTED LYMPHOMA

- Bilateral Pleural Effusions
- Pericardial Effusion
- Multiple large splenic lesions

CASE 5

- 42 yo male with PMH of HTN, DM, HIV and poor compliance with medications
- Presents with fever, productive cough, and night sweats
CASE 5 - PULMONARY TB WITH CASEOUS PLEURAL EFFUSION

- Complex pleural effusion
- Bilateral interstitial edema
- Pleural based lesion

CASE 6

- 25 yo male with PMH HIV x 1 year
- Last CD4 count 550 but has been off meds x 1 month
- Presents with increasing SOB
- Worsening cough and hemoptysis with recent 5 pound weight loss
CASE 6 - PULMONARY TB

• Focal Infiltrate

• Unilateral pleural effusion

CASE 7

• 21 yo male presented with increasing SOB and cough

• Non compliant with his HIV meds with last known CD4 count of 200

• HR 140, BP 90/50, Temp 39.5, RR 50, O2 sat 89% on 2L NC

• Pale appearing and looks ill. Tachycardia with retractions and crackles throughout
CASE 7 - PCP PNEUMONIA

- HIV pt with low CD4 count, fever, hypoxia
- Typical CXR appearance
- Bilateral B lines by ultrasound with no evidence of depressed EF
CASE 8

- 36 yo female hx of HIV currently compliant with her ARV regimen
- Last known CD4 count of 200
- Presents with increasing fatigue and decreased urine output
HIV-Associated Nephropathy

CASE 8 - HIVAN

- Normal to large size kidney
- Hyperechoic compared to adjacent liver and spleen
- Can help predict kidney injury esp in the face of poor to no lab facilities

SOFT TISSUE
Questions