Saturday Night Fever

Shaka Brown
Capital Congress
Shaka Zulu – October 31, 2012
“SICK SUCKS”

How my illness started
August to October 2013

Symptoms:
• Severe fatigue
• Night sweats
• Low grade fever
• Weight loss – 50 lbs in 3 months
• Did not seek medical attention
• And then…
Visit to the doctor

• Visited primary care physician (PCP)
• Diagnosed with epididymitis – treated with ciprofloxacin
• Other testing performed, all negative - including HIV testing
• Mild improvement but still had severe fatigue and weakness
• Returned to PCP who provided a letter and instructions to visit the Emergency Department (ED)
THE DIAGNOSIS

Hospital course
Hospital Course

Admission notes
• Presented to the ED on 11/14/2013: fever, shortness of breath with dry cough, 50 lb. weight loss over 3 months, and testicular infection with ongoing edema
• MEDICATIONS: none
• ALLERGIES: none
• PMH (Past Medical History): negative
• PSH (Past Surgical History): negative
• SOCIAL HISTORY: AA male born in US. Travel to more than 37 countries as international dancer. Alcohol socially. Denies tobacco. Denies illicit drug use.
What disease process does the X-ray show?

Miliary tuberculosis

Miliary TB occurs when the *Mycobacterium tuberculosis* organism enters the bloodstream and disseminates to multiple sites in the body. The name comes from a distinctive pattern seen on the radiograph which appears as tiny spots, ‘millet seeds’, scattered throughout the lung.
Laboratory Testing

• Given CT appearance, sputum was obtained on 11/17
• RESULTS: AFB Smear (+), TB PCR (+)
• REFFERAL: Specimen was sent to the Florida State Public Health Laboratory where molecular MDR screen testing (by Hain MTBDR\textit{plus} assay) showed no \textit{katG} or \textit{inhA} mutations but was \textit{rpoB indeterminate} (wild type band missing, no mutant band present i.e. a mutation is present but it is not one of the characterized mutations detected by the Hain assay)
Hospital Course continued

- Placed on TB medication
- On 11/19/13 fell in hospital room and hit head on a trash can
- 11/20/13
Is this TB as well? Just treat as TB or perform a biopsy to make sure there is no other disease process?

Brain CT showed:

• Multiple hypodense regions in the bilateral subcortical white matter, left basal ganglia, and left middle cerebellar peduncle

• A slight mass effect noted on the fourth ventricle with no evidence of obstruction

• A steroid was added to the treatment regimen
Hospital Course continued

• Experiencing tingling and shooting pain in feet, imbalance and poor urine control
• Neurology consult concluded ‘severe sensory abnormalities in feet bilaterally with associated gait instability’ and performed spinal MRI
Spine MRI – 12/2/13
More TB?

MRI on 12/2/13 revealed L4-5 spondylitis with paraspinal abscess with compression on S1

Three ring enhancing lesions identified within the thoracic spinal cord

- The lesions at T10 and T12 were felt to be intermedullary in nature
- Unclear whether the lesion at T5-T6 was intramedullary within the dorsal cord/or leptomeningeal in nature
Laboratory Testing

REFERRAL: Specimen was sent to CDC’s Molecular Detection of Drug Resistance (MDDR) Program on 12/3 for additional molecular testing which identified a CAC>AAC His526Asn \textit{rpoB} mutation interpreted as “low level but probably clinically relevant rifampin resistant.”
MDR-TB? Still got to work out tho!
# Laboratory Testing

<table>
<thead>
<tr>
<th>Drug</th>
<th>FSPHL</th>
<th>MIC</th>
<th>Suscept Cutoff</th>
<th>Interpretation</th>
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<tbody>
<tr>
<td>Streptomycin</td>
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<td>Rifabutin</td>
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<td>Moxifloxain</td>
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<td>PAS</td>
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<td>Pyrazinamide</td>
<td>No pncA mutation</td>
<td></td>
<td></td>
<td>Susceptible</td>
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</table>
Treatment for MDR-TB

- Medications determined based on diagnosis of potentially RIF resistant, disseminated TB

  1. Amikacin 1gm IV 3x weekly
  2. Rifabutin 300mg PO daily
  3. Isoniazid 300mg PO daily
  4. Cycloserine 250mg PO daily
  5. Pyridoxine 200mg PO daily
  6. Levofloxacin 750mg PO daily
  7. Ethambutol 1200mg PO daily
  8. Pyrazinamide 1500mg PO daily
Treatment – what does that look like? What is DOT?
• Packed a bag for one night stay in mid November 2013…
April to July 2014

- Readmitted in April with a 3-day headache and slurred speech. Brain lesion in left frontal lobe shown to have increased in size. Steroid treatment resolved symptoms (5 day hospital stay)
- Readmitted in July with continued and increased headaches, fatigue, lack of coordination and bilateral weakness. Large legion in left frontal lobe larger and now multilobulated, indicating that an abscess may be forming (16 day hospital stay)
Brain MRI – 4/24/14 and 7/7/14
Brain lesion is not getting better! Is this IRIS or drug resistant TB?

- Neurosurgery was consulted to perform a left pterional craniotomy for resection of the insular mass
- PATHOLOGY: Necrotizing granulomatous inflammation, AFB stains (-)
- TB LAB: TB PCR (-) x2, AFB smear and culture (-)
July 2014

- Steroids and more drugs added to the TB regimen: linezolid and ethionamide
  1. Isoniazid 500mg PO daily
  2. Rifabutin 300mg PO daily
  3. Levofloxacin 750mg PO daily
  4. Ethionamide 500mg PO BID
  5. Cycloserine 250mg PO daily
  6. Linezolid 300mg PO daily
  7. Pyridoxine 200mg PO daily
- Discharged on July 23
- Brain MRI repeated September 26
TB treatment is a slow process

Plan for 18-month treatment from date of last culture-positive specimen on 11/20/13

... 5/20/2015 couldn’t come fast enough

It’s like a marathon!
May 2015

- Successfully completed 18 months of MDR-TB treatment (and a marathon)
Thank you!

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