TB NURSE NETWORK MEETING

April 20, 2016

10:00-12:00 PM

Conference call in number: 1-888-557-8511

Passcode: 2544873

Agenda

- Announcements (10 min)
  - Archived and upcoming webinars
  - Upcoming meetings and events
  - Online trainings and materials
- Case Presentation (20 min)
  - Missy Endres and Dr. Sugandha Lowhim, Ingham County Health Department
- Updates from the NTCA TB Conference in February (20 min)
  - Peter Davidson & Shona Smith
- Open Forum (20 min)
- Close and Adjourn

Announcements

- Next TBNN meeting
  - Wednesday July 20th, 2016
  - 10-12 PM EST
  - Online webinar and conference call
  - Lansing location: TBD

Recently Archived Webinars

- Mayo Clinic Center for Tuberculosis
  - “TB Diagnostics in 2016: Landscape, Priorities, Needs, Market”
    - Archived here
  - “TB and the Homeless” – Dr. Kissner!
    - Archived here
- Southeastern National Tuberculosis Center (SNTC)
  - Grand Rounds: “Maximizing Rifamycins” Charles Peloquin, Pharm.D.
  - Archived here
- NTNC (National TB Nurse Coalition – within the NTCA)
  - “It’s Never Just TB: TB and Alcoholism”
  - Webinar slides are here

Upcoming Webinars

- Rutgers Global TB Institute
  - “Tuberculosis in the School Setting: Collaborations in Care”
  - **Wed May 4, 2016**
  - Course is full, but will be archived here
- Mayo Clinic Center for Tuberculosis
  - “TB in the Federal Corrections System: Status, Challenges, and Opportunities”
  - **Wed May 11, 2016 1-2 PM EST**
  - Register for this and other webinars here

Online Trainings

Southeastern National Tuberculosis Center: Self-Paced Training

- “Treating LTBI in Special Situations”
- Drug resistance, hepatitis, HIV/AIDS, infants and children, pregnancy, renal failure, TNF-antagonists and transplantation
- 4.0 CE credits, no registration needed, complete at any time

Online Materials: World TB Day

MDHHS 2016 World TB Day Conference

- www.Michigan.gov/tb
- PowerPoint presentations
- Conference resource packet

Upcoming Events

- TB Nursing Certification course
  - 1.5 days of course material plus optional TST/TTT workshop for those who need to certify/recertify
    - Let us know if you can be an instructor
  - Dates TBD: between June 28th and July 1st
  - Okemos, MI, MPHI campus

- Dealing with discordant TST and IGRA results
- Immigrant refugee guidance
- Occupational screening for TB
- Interpreting IGRA results
- TB lab overview
- Legal aspects of active TB

- Travel and flight exposures
- TB in the prison population
- TB screening in non-traditional facilities such as hospices, adult foster care homes, and long-term care facilities
- LTBI treatment regimens

Upcoming Events

- TB Tri-State Intensive
  - Audience: Public health professionals in Michigan, Indiana and Ohio
  - Hosted by MDHHS TB Unit and the Mayo Clinic
  - Dates TBD: late September early October
  - Dearborn, MI, Arab American History Museum
  - Approximately 1.5 days of material + half day of community practicum

Case Presentation

Missy Endres, RN, BNS

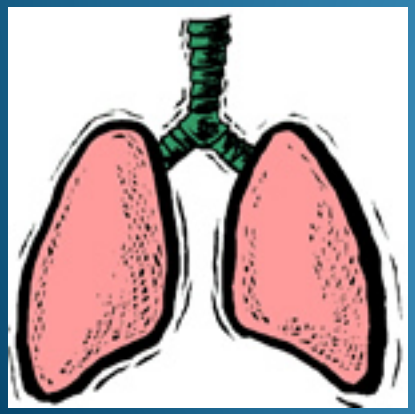
Sugandha Lowhim, MD, MPH

- Ingham County Health Department

TB vs. Sarcoidosis Which Came First?

Missy Endres, RN, BSN
Sugandha Lowhim, MD, MPH

TB Nurse Network Presentation



History

- 34 year old AA female 'BF', household contact to pulmonary TB case diagnosed in March 2014.
- BF reported history of Sarcoidosis currently taking Prednisone daily and Methotrexate weekly. Reported elevated blood sugars but not on diabetic medications.
- 3/26/14 contact investigation CXR showed "slightly nodular infiltrate in the lungs, which has not progressed when compared to 9/19/13 CXR".

History (cont'd)

- Sputum specimens were collected x 2 (one induced), both AFB negative.
- QFT 'indeterminate' at Lab A on 3/29/14 and repeat QFT at Lab B was negative on 4/3/14.
- ICHD recommended window prophylaxis and BF started INH prescribed by her Pulmonologist who had initially diagnosed her Sarcoidosis.

History (cont'd)

- Household contact (Boyfriend) was in isolation for 70 days. BF's repeat QFT on 8/19/14 was "indeterminate" and a subsequent QFT was "negative" on 9/8/14.
- No conversion of known contacts.
- Boyfriend completed 9 months of treatment for cavitary Pulmonary TB in January 2015.

June 2015

- BF contacted CD Nurse stating “I think I have TB”.
- ER visit on 5/9/15 due to chest pain. CXR report “Lung fields clear, no pneumothorax, no rib deformity”.
- In early June 2015, BF developed Lt. upper arm pain and swelling. A CT of Lt. arm showed findings “concerning for Lt. arm abscess”. An incidental small cavity (1.8cm x 1cm x 2cm) seen in Lt. lateral mid-lung.

June 2015

- Due to history of TB contact and new cavitary lesion, BF was directly admitted to hospital isolation bed.

- QFT on 6/17/15 now positive.
- Sputum collected after admission AFB positive x 2/3.
- Notified by MDHHS lab of NAAT positive.

- Lt. arm wound AFB smear negative on 6/19/15, culture positive on 7/13/15.
- BF started on 4 drug regimen on 6/19/15.

The Rest of the Story…..

- On 8/26/13 BF was seen in the ER for dry cough lasting over one month. She also reported fever and chills.
- CXR showed bilateral perihilar and mediastinal lymphadenopathy suggestive of Sarcoidosis. A 9/17/13 CT chest confirmed hilar and mediastinal adenopathy.
- BF was seen by ophthalmologist on 10/18/13 for visual complaints, facial palsy and eye swelling. Diagnosed with possible Heerfordt's Syndrome.

The Rest of the Story (cont'd)…

- Started on Prednisone 60mg qd by ophthalmologist who recommended pulmonologist begin treatment with methotrexate.

- Bronchoscopy on 11/11/2013 with LLL biopsy demonstrated a single non necrotizing granuloma, negative for neoplasm.

- Bronchial washings negative for AFB, no growth in 8 weeks.

The Rest of the Story (cont'd)…

- BF had an ophthalmology appointment on 7/28/15 and was told that she probably had TB uveitis , not sarcoidosis and that TB would account for all of her symptoms. She was started on a slow prednisone taper.
- On 8/4/15 we requested pathologist review LLL biopsy slide from 11/11/13 for TB vs. Sarcoidosis.

- The pathology slide review showed ' presence of a rare AFB compatible with TB'.

The Rest of the Story (cont'd)…

- Phone consult with Dr. Sunstrum on 8/12/15. Conclusion: Most likely TB all along, immune suppression from prednisone probably lead to arm abscess.
- Recommendation: If demonstrates conversion at 2 months, will only need 6 months of treatment.
- TB treatment was complicated by development of a myriad of symptoms which interfered with DOT.
- Completed 6 months of treatment 12/22/15.

Discussion Points

- Does BF have TB only? Does she have concomitant Sarcoidosis?
- Was BF the index case and 'infect' her boyfriend or did she get TB from him?
- Which came first? TB or Sarcoidosis? Does she have both?

Updates from the NTCA TB Conference

- Peter Davidson
- Shona Smith

National Tuberculosis Controllers Association

The Union — International Union Against Tuberculosis and Lung Disease
Health solutions for the poor

2016 TB CONFERENCE

FEBRUARY 24-27, 2016
Sheraton Denver Downtown Hotel, Denver, CO

Updated IGRA Guidelines

- NTCA IGRA Workgroup
  - Best practice statements representing consensus experience of US TB Control Programs to guide use of IGRAs
    - Updates since 2010 MMWR
    - Discordant results (TST v IGRA or IGRA v IGRA)
    - Programmatic and clinical decision-making

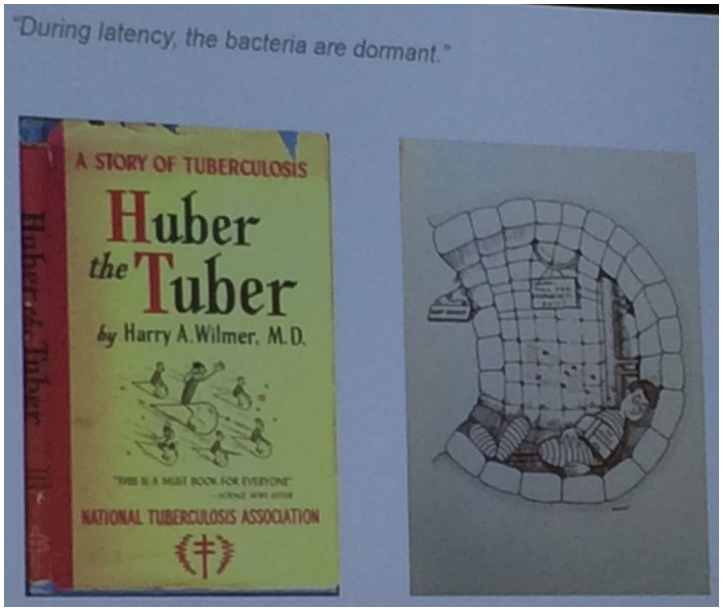
- Summer, 2016

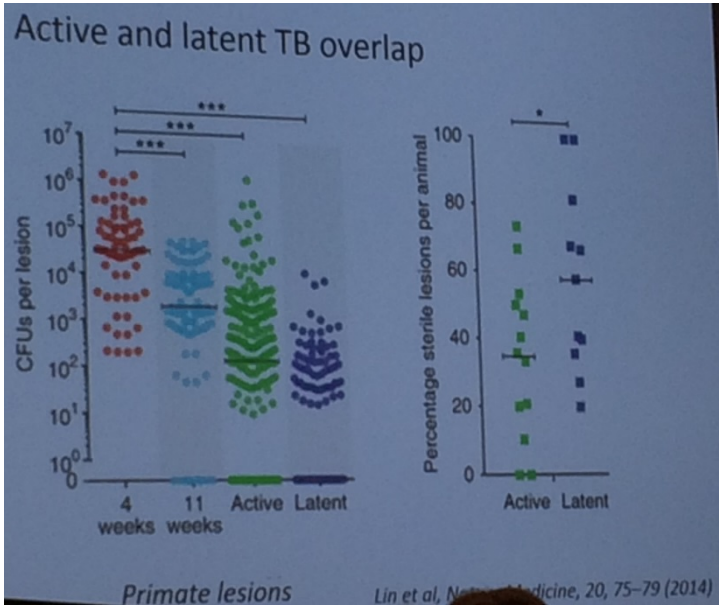
Consensus Statement: Cepheid Xpert MTB/RIF to Discontinue AII

- NTCA and APHL
  - Guidance to clinicians, nurses and ICPs on use of Xpert as part of decision to discontinue AII
  - 2/2015, FDA approved change in package insert
    - Negative Xpert highly predictive of negative sputum AFB smear
    - Xpert results from 1 or 2 sputum specimens as alternative to serial AFB smears to discontinue AII for suspected pulmonary TB pts
  - Devil in Details
    - Patient selection
    - Sputum Quality & Quantity
    - Specimen handling
- Spring-summer, 2016

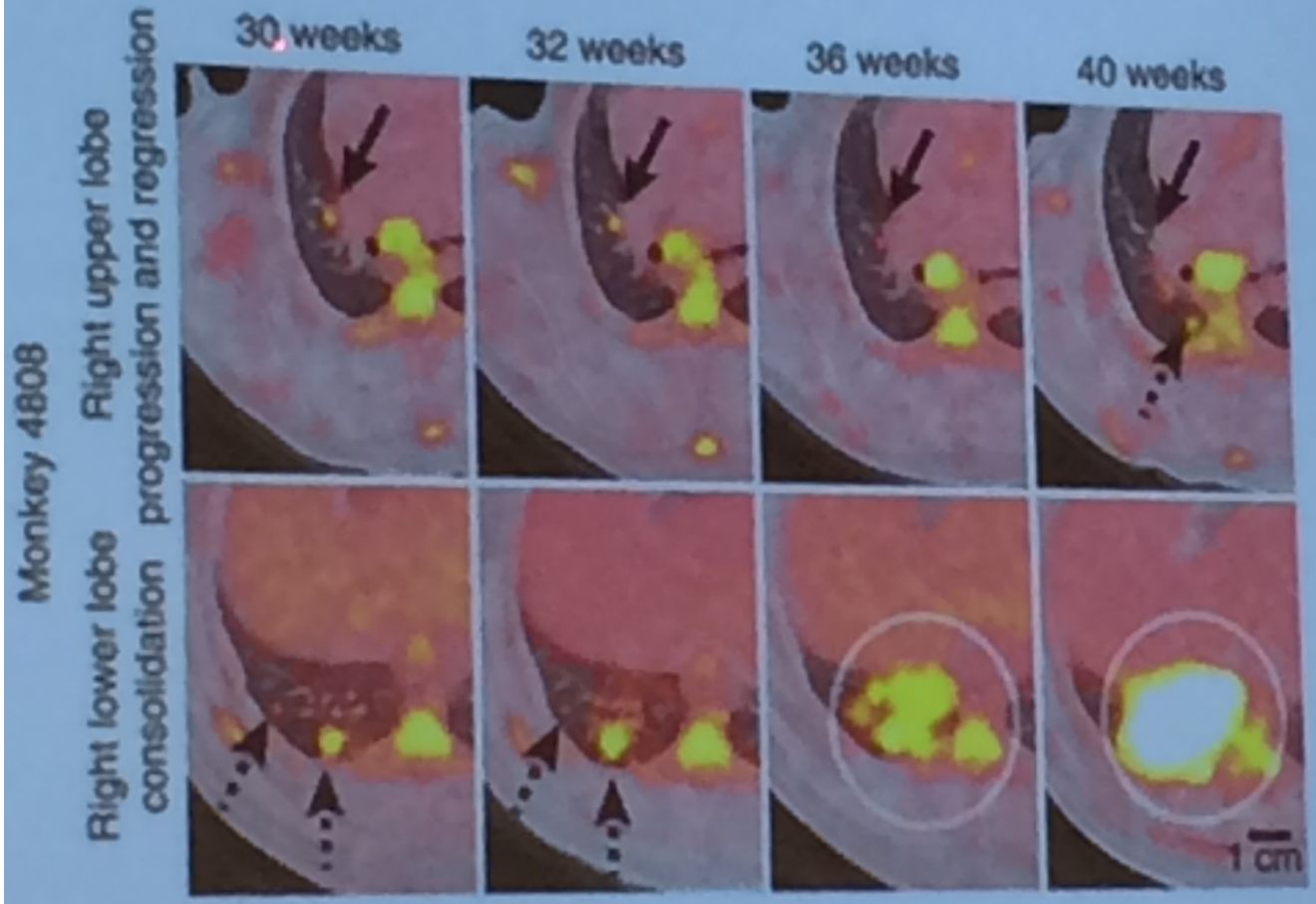
New Research on "L"TBI

- Assumptions
  - Latency = dormant
  - But preventive treatment works….
- Animal models; "omics"; PET/CT
- "Activity" of TB in latency is lower than disease, but <u>not zero</u>
  - # viable bacteria per lesion in latency overlaps active (toward the low end)
  - Real difference was proportion of sterile lesions in latent vs active





PET/CT imaging of TB in primates



Probe:
^{18}FDG

Seen in active and latent TB; also in humans.

Lin et al, Nature Medicine, 20, 75–79 (2014)

“Don’t Tell Me What I Can’t Do – Tell Me How To Do It!”

David E. Griffith MD, Heartland National TB Center

Insights into Eliminating TB …based on Epi Modeling

"Elimination in any reasonable time frame WILL REQUIRE preventative therapy on a massive scale."

US Elimination: Interrupting transmission has a relatively small impact on the epidemic

- We can eliminate TB in the US-born with continuing current trends by 2056
- We cannot eliminate TB by 2060 in the foreign-born

Global Elimination: Interrupting transmission leaves us 100x above the elimination threshold

Key Questions:

Do individuals who are foreign born, homeless, etc. mix exclusively with other people from the same group?

How much will imported TB fall if global TB declines by 50%?

My take-away: Mixing between "hotspots" and the general population may be a critical driver of TB incidence

Epi Ideas to Explore

- Messaging in MDSS for LTBI
  - □ Get good LTBI numbers and demographics
- Contact Investigations
  - □ Develop a standardized way to collect data
  - □ Utilize MDSS to consistently record CI results
- TB Death Rates
  - □ Compare to other infectious diseases (i.e. flu)
  - □ Figure out how to measure death due/related to TB
  - □ Remind that these were supposedly preventable deaths
- TB Case Rate among the Homeless
  - □ Identify a source for population number and demographics (ex: HUD / HMIS?)
  - □ Analyze trends among “registered” population

Open Forum

“If a TB patient has a PEG tube, should the public health nurse be responsible for DOT and administer their meds?”

Thank you!

- Meeting notes will be sent to everyone on the TB Nurse Network list

- If you have questions/comments regarding TBNN, please contact:

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