TB and Pregnancy Session: Case Presentation

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Case

ID: Two-week-old, term infant
Chief Complaint: Respiratory distress and fever
History of Presenting Illness:
   - Presented to general pediatrician for two-week well infant check-up
   - Noted tachypnea, and respiratory distress
   - Sent immediately to a children’s emergency department (tertiary referral centre)
   - In the ER was noted to be febrile (38.4 C), tachypneic (80 breaths/min), normal heart rate, normal oxygen saturation
Case

- Full septic work-up (CSF, blood culture, urine culture) completed and empiric broad spectrum antibiotics started
- Continued to have fever, tachypnea, and tachycardia during admission
  - Responsive to acetaminophen
- Nasopharyngeal aspirate: negative for COVID, influenza, RSV
- Septic work-up: cultures negative
Case

• CXR interpretation: “Moderate bilateral pulmonary opacifications.”

• Discharged with diagnosis of viral lower respiratory tract infection
Case

- Returns to general pediatrician 48 hours post-discharge
- Nurse in office notes baby is:
  - Lethargic
  - Hot to touch (temp 38.1 Celsius),
  - Tachypneic (> 70 breaths/min)
- Sent back to the emergency department
- CXR is repeated
Case

- Interpretation: “Diffuse bilateral nodular opacities throughout, an atypical infection should be considered.”
- Requires intubation and is sent to the pediatric intensive care unit
Case

- The ICU team sends nasogastric aspirates for fungal microscopy and culture and acid-fast bacilli microscopy and culture
  - Smear positive, M. tuberculosis PCR positive

- QUESTION: How does a two-week-old contract tuberculosis?
Source Case Investigation

- Local public health unit is immediately involved
- Only three adult contacts identified: mother, father, grandparent
  - From community with ongoing TB transmission
- Both the mother and father well, normal chest x-rays
  - Sputum collected

- Are we missing something?
Maternal History

- 31 yo G9P7 female, from remote indigenous community
  - New diagnosis of diabetes in pregnancy
  - Buprenorphine
- Pregnancy uncomplicated
- Labor uncomplicated
- Gestational age= 37+6 weeks
- APGARS= 9, 9; Birthweight= 3.5 kg (well baby)
Good Advice

- A trusted colleague recalls a similar case experience...
- Mother agrees to go for endometrial biopsy
  - M. tuberculosis PCR positive, smear negative, culture positive