Primum non nocere

A case of latent tuberculosis infection
Benjamin Smith
benjamin.m.smith@mail.mcgill.ca

Latent Tuberculosis Treatment

- Effective
- Reduces TB morbidity and mortality
- Reduces health care costs
- Important for TB control in low incidence countries
- Recommended for people at increased risk of developing active disease

Case

- A 33 year old recently landed immigrant is referred because of an abnormal chest film
Case

- Question 1: Does this patient have LTBI?
- Question 2: Should he be offered treatment for LTBI?

Case

- Asymptomatic
- Born in Morocco -> Montréal 2009
- Non-smoker, no alcohol
- No medications
- No personal history of TB, no close contacts
- No immune-deficiencies
- No diabetes, renal disease, cancer
- Normal BMI, normal chest exam, + BCG scar
- No previous TST, no previous CXR
Case

- Question 1: Does this patient have LTBI?
  - Additional information required:
    - Rule out active TB: Obtain 3 sputum samples for mycobacteria
    - Determine timing of BCG -> BCG Atlas
    - Perform tuberculin skin test -> 13mm

http://www.bcgatlas.org/
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http://www.tstin3d.com/
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Case

- Question 1: Does this patient have LTBI?
  - Given the clinical information and the TST result, his probability of being infected with TB is 80% 
  - Given the clinical information, his lifetime risk of developing active TB is 47%

Case

- Question 2: Should he be offered treatment for LTBI?
  - Patient is healthy
  - Commitment of up to 9 months of therapy
  - Potential for serious adverse events
    - Hepatitis, liver failure
    - Drug interactions
    - Nausea, vomiting
    - Rash, fever
Case

- Patient provided 3 sputum samples: negative for TB
- No history of liver disease, no alcohol use
- Started on INH therapy August 30, 2010
- At 1 month follow-up: feeling well, compliant

Case

- After 7 weeks of therapy: wife calls because of nausea x 1 week
- Blood tests:

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<tbody>
<tr>
<td>Total Bilirubin</td>
<td>Aug 30</td>
<td>14</td>
<td>14</td>
<td>111*</td>
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<tr>
<td>ALT</td>
<td>Aug 30</td>
<td>22</td>
<td>40</td>
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<td>131</td>
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<td>274*</td>
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<tr>
<td>INR</td>
<td>Aug 30</td>
<td>1.66*</td>
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INH-Hepatitis

- Most common serious complication of INH-therapy
- Overall incidence 1 in 1000 persons treated
- Alcohol and age-related increase in risk
- Fatalities and fulminant failure requiring transplant have been reported
- Informing patients of symptoms essential
- Baseline liver testing recommended
- Serial measurements recommended in those with underlying liver disease, hepatotoxins, symptoms

Take home points

- LTBI therapy is effective but has risk of serious adverse events
- Before testing someone for LTBI, consider their risk of developing active disease
- Risk:benefit of LTBI therapy ≠ Risk:benefit of active therapy
- Websites such as TSTin3d and BCGatlas can help inform your decision to treat someone for LTBI
- A well-informed patient and health care team is the best means of preventing irreversible harm