Case

Most famous celebrity in the world with TB
Treatment of Drug Resistant TB
<table>
<thead>
<tr>
<th>Pattern of drug resistance</th>
<th>Suggested regimen</th>
<th>Duration of treatment (mo)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>INH (± SM)</td>
<td>RIF, PZA, EMB (an FQ may strengthen the regimen for patients with extensive disease)</td>
<td>6</td>
<td>In BMRC trials, 6-mo regimens have yielded ≥95% success rates despite resistance to INH if four drugs were used in the initial phase and RIF plus EMB or SM was used throughout. Additional studies suggested that results were best if PZA was also used throughout the 6 mo (Rating BII). Fluoroquinolones were not employed in BMRC studies, but may strengthen the regimen for patients with more extensive disease (Rating BIII). INH should be stopped in cases of INH resistance (see text for additional discussion).</td>
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<tr>
<td>INH and RIF (± SM)</td>
<td>FQN, PZA, EMB, IA, ± alternative agent</td>
<td>18–24</td>
<td>In such cases, extended treatment is needed to lessen the risk of relapse. In cases with extensive disease, the use of an additional agent (alternative agents) may be prudent to lessen the risk of failure and additional acquired drug resistance. Resectional surgery may be appropriate (see text).</td>
</tr>
<tr>
<td>INH, RIF (± SM), and EMB or PZA</td>
<td>FQN (EMB or PZA if active), IA, and two alternative agents</td>
<td>24</td>
<td>Use the first-line agents to which there is susceptibility. Add two or more alternative agents in case of extensive disease. Surgery should be considered (see text).</td>
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<tr>
<td>RIF</td>
<td>INH, EMB, FQN, supplemented with PZA for the first 2 months (an IA may be included for the first 2–3 months for patients with extensive disease)</td>
<td>12–18</td>
<td>Daily and three times weekly regimens of INH, PZA, and SM given for 9 mo were effective in a BMRC trial (Rating BII). However, extended use of an injectable agent may not be feasible. It is not known if EMB would be as effective as SM in these regimens. An all-oral regimen for 12–18 mo should be effective (Rating BII). But for more extensive disease and/or to shorten duration (e.g., to 12 months), an injectable agent may be added in the initial 2 mo of therapy (Rating BII).</td>
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</tbody>
</table>

Definition of abbreviations: BMRC = British Medical Research Council; EMB = ethambutol; FQN = fluoroquinolone; IA = injectable agent; INH = isoniazid; PZA = pyrazinamide; RIF = rifampin; SM = streptomycin.

FQN = Fluoroquinolone; most experience involves ofloxacin, levofloxacin, or ciprofloxacin.

IA = Injectable agent; may include aminoglycosides (streptomycin, amikacin, or kanamycin) or the polypeptide capreomycin.

Alternative agents = Ethionamide, cycloserine, p-aminosalicylic acid, clarithromycin, amoxicillin-clavulanate, linezolid.


Case
Case

- Patient is a 16 year old girl from Haiti
- She arrived in late November 2000
- She had a history of cough and had a diagnosis of asthma and allergies
Case

- She was taken to her primary care physician for further evaluation
- She was given antibiotics for bronchitis and improved minimally
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- Over the course of the next month, she was seen several times for asthma and bronchitis
- A tine test was placed and was read as negative
- Her aunt, an ICU nurse, insisted on a CXR
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- She was subsequently admitted
- Sputum was 3+ smear positive and MTD (nucleic acid amplification test) positive
- Mantoux ppd was 15mm
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- Medical history was unremarkable – no history of TB
- No other meds or known drug allergies
- Non-smoker, student, fluent in three languages
- No immediate family history of TB
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- She was started on HRZE while in the hospital
- Remained hospitalized for over two weeks
- No problems with meds
- Continued with DOT as outpatient
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- She had a very good clinical response to treatment
- Within four weeks of therapy her sputums were smear negative
- During therapy sputums were routinely ordered to monitor therapy
Case

- At around week eight of therapy her smears became positive once again
- The organism was pan-sensitive
- She had not missed any DOT doses
- No evidence of malabsorption
What now?
Case

- She was continued on four drugs by DOT
- She was clinically doing well but weight gain was slow, only a net increase of about five pounds
- CXR was done
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- One of the smear positive specimens came back as M abcessus
- Now what should be done, if anything?
Case

- Over a two week period of time, a total of six specimens were obtained that were smear positive.
- All grew out M. abcessus and none had any growth of MTB.
How do we treat her now?

- Medical therapy with other agents
- Do we continue just the TB meds and treat this infection after TB is treated?
- Does surgery have a role?
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- She was evaluated as a potential candidate for surgery with a high resolution CT of the chest, spirometry and lung volumes with DLCO, and split lung functions
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- The plan was to treat with IV amikacin and cefoxitin for four weeks, resect the destroyed lung with peri-operative antibiotics, and then continue the antibiotics for two weeks post-op
Case

- She tolerated the procedure very well with minimal blood loss
- She was discharged home on post-op day number five
- Cultures from the stump site and apical fluid collection were negative for MTB and M. abcessus
Case
Abdominal Pain, weight loss and fever
Case

Patient with breast cancer and weight loss and sudden chest pain
Case

35 year old woman human trafficking case
Case
Thoracoplasty
Case
Asymptomatic patient
Miliary TB?