Management of HIV/TB Co-Infection in Adults

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Objectives

• Explain why TB is such a serious disease for HIV-positive patients.
• Understand the human rights approach to comprehensive TB/HIV care in practice.
• Learn to manage suspected TB in ambulatory HIV-positive patients who do not have danger signs.
• Learn to manage suspected TB in seriously ill HIV-positive patients.
HIV/TB Co-infection

• People with HIV more likely to get TB. Their disease will be more severe and the diagnosis more difficult to achieve because their TB presentation is often extrapulmonary or atypical.

• TB can often worsen HIV/AIDS, leading to more rapid decline in health and death.

Test all HIV patients and anyone with a cough lasting more than 3 weeks!
Screening for TB

• Symptoms:
  ▫ Cough > 3 weeks
  ▫ Fever, night sweats, weight loss
  ▫ Close contact with TB patient

• Danger signs:
  ▫ Temp > 39 C
  ▫ HR > 120
  ▫ RR > 30
  ▫ Needs assistance walking
Integrated Treatment

- Anti-TB medication
- ART
- Cotrimoxazole
- Adherence support (DOT)
- Nutritional and social support
- Active case-finding
- Patient education
Introducing Meds in New Co-Infection

- Day 0: Start anti-TB treatment
- Day 7: Start cotrimoxazole prophylaxis
- Day 14: Start ART

Staging the introduction of the different medications helps avoid confusion from overlapping side effects.
Anti-TB Treatment Regimens

Figure removed due to copyright, showing treatment regimens for different patient categories: new case, previously treated case, not responding to treatment.
Multi-Drug Resistant (MDR) TB

- MDR TB: resistant to isoniazid (H) and rifampicin (R)
  - XDR TB: resistant to H, R, and two 2nd line drugs

- More difficult and expensive to treat
- Always fatal if not treated
- Mainly caused by lack of adherence to treatment (ineffective TB programs)
## ART regimens chart for treatment-naïve adults

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>ART Regimen</th>
<th>Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preferred regimen</strong></td>
<td>TDF / 3TC or FTC / NVP Tenofovir / Lamivudine or Emtricitabine / Nevirapine</td>
<td><strong>Initial phase (first 15 days):</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(TDF 300mg + 3TC 300mg) 1 tab 1x/day and NVP 200mg 1 tab 1x/day and NVP 200mg 1 tab 1x/day OR</td>
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<td>(TDF 300mg 1 tab 1x/day and FTC 300mg 1 tab 1x/day and NVP 200mg 1 tab 1x/day)</td>
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<td>Maintenance phase (after 15 days):</td>
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<td></td>
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<td>(TDF 300mg + 3TC 300mg) 1 tab 1x/day and NVP 200mg 1 tab 2x/day OR</td>
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<tr>
<td></td>
<td></td>
<td>TDF 300mg 1 tab 1x/day and FTC 300mg 1 tab 1x/day and NVP 200mg 1 tab 2x/day</td>
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<tr>
<td><strong>Alternatives:</strong></td>
<td>TDF / 3TC or FTC / EFV Tenofovir / Lamivudine or Emtricitabine / Efavirenz</td>
<td></td>
</tr>
<tr>
<td>If NVP contra-</td>
<td></td>
<td><strong>Initial phase (first 15 days):</strong></td>
</tr>
<tr>
<td>indicated (ex: concomitant anti-TB treatment or allergy)</td>
<td></td>
<td>(TDF 300mg + 3TC 300mg) 1 tab 1x/day and EFV 600mg 1 tab 1x/day OR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TDF 300mg 1 tab 1x/day and FTC 300mg 1 tab 1x/day and EFV 200mg 1 tab 1x/day</td>
</tr>
<tr>
<td>If TDF contra-</td>
<td>ABC / 3TC / NVP Abacavir / Lamivudine / Nevirapine</td>
<td></td>
</tr>
<tr>
<td>indicated (ex: renal insufficiency)</td>
<td></td>
<td>Maintenance phase (after 15 days):</td>
</tr>
<tr>
<td></td>
<td>ABC / 3TC / EFV Abacavir / Lamivudine / Efavirenz</td>
<td>ABC 600mg and 3TC 300mg 1 tab 1x/day and NVP 200mg 1 tab 2x/day</td>
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<td>ABC 600mg + 3TC 300mg 1 tab 1x/day and EFV 600mg 1 tab 1x/day</td>
</tr>
</tbody>
</table>
Cotrimoxazole Prophylaxis

• Criteria for starting cotrimoxazole prophylaxis
  ▫ CD4 cell count below 350 cells/mm³
  ▫ WHO Clinical Stage 3 or 4
    • Stage 3 = symptomatic HIV infection
    • Stage 4 = progression from HIV to AIDS

• Dosage prescribed
  ▫ 960mg orally once a day

• Discontinuation
  ▫ Only if CD4 count is above 350 cells/mm³ > 6 months after starting ART
Accompaniment and Support

• Directly Observed Therapy (DOT) is the process of distributing therapy and watching patients take their medications
  ▫ Improves adherence
  ▫ Prevents drug resistance
  ▫ Increases chances of being cured

• CHWs can also monitor the status of patients: other health issues, nutrition, economic problems, etc.

• Active case-finding is an important part of maintaining the health of the community and surveillance.
Patient Education:
5 Key Messages

• Adherence
  ▫ **Take meds EVERYDAY** and complete the FULL course
• Monitor symptoms
  ▫ **Tell CHW about any serious side effects**
• Case-finding
  ▫ **Bring family and close contacts to clinic for testing**
• Get/obtain nutritional and social support
• Family planning
Infection Control

- Teach TB patient etiquette
  - Patients should cover mouth when coughing or sneezing
- Isolate TB patients
- Wear N95 mask
- Good treatment
  - Assure adherence and provide nutritional and social support
Extrapulmonary TB

- TB outside of the actual lungs
- Smear-negative
- Generally non-contagious
- More common in immunocompromised patients
- Suspect extrapulmonary TB if
  - Clinical suspicion of TB
  - Negative sputum smears and CXR
  - No response to oral antibiotics
  - Second negative set of sputum smears

*Image removed due to copyright, showing various sites of extrapulmonary TB infection*