Answers

Recommendations on the Management of Human Immunodeficiency Virus and Tuberculosis Coinfection

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1. Which of the following statements is incorrect about drug interaction and dosage adjustment with concomitant TB and HIV treatment?
   (a) Rifamycins are the TB drug most implicated with highly active antiretroviral therapy
   (b) Often but not always the dosage of protease inhibitor or non-nucleoside reverse transcriptase inhibitor need not be adjusted when administered together with TB drugs
   (c) **Before the addition of protease inhibitor, a washout period of 1 week is recommended for switching rifampicin to rifabutin** ✓
   (d) Rifabutin is preferred to rifampicin as a whole when protease inhibitor is to be used
   (e) Kaltera is used at standard dose together with rifabutin 150mg alternate day or twice weekly

2. Which of the following is not true about the presentation of TB in HIV-infected subjects?
   (a) Extrapulmonary involvement is more common in HIV positive than HIV negative subjects
   (b) Disseminated TB disease is associated with a low CD4 count of 200/ul or less
   (c) Chest radiography may reveal more lower lobe shadows
   (d) Meningitis, gastro-intestinal disease and pleural effusion are common presentations of extrapulmonary TB in HIV patients
   (e) **None of the above** ✓

3. Which of the following is incorrect about diagnosis of TB in HIV-infected patients?
   (a) **Sputum for acid fast bacilli (AFB) smear examination is usually positive in pulmonary disease** ✓
   (b) AFB in sputum of HIV infected patients could be due to infections other than TB
   (c) Automated liquid culture systems such as BACTEC is preferred to solid culture media
   (d) DNA hybridization probe may aid rapid diagnosis
   (e) *Mycobacterium kanasii* should be considered in the differential diagnosis of pulmonary Mycobacterial diseases

4. Which of the following statements is not true concerning screening and management of TB and HIV?
   (a) HIV should be screened in patients diagnosed with TB and vice versa
   (b) A cutoff of 5mm induration is recommended for a positive tuberculin skin tests using 2 units PPD-RT23 in screening for latent TB in HIV patients
   (c) A course of 9-month isoniazid is the standard for treating latent TB infection
   (d) **Blood testing for interferon-gamma against TB antigens is a standard diagnosis tool for latent TB in HIV infected subjects** ✓
   (e) None of the above

5. Which of the following is incorrect about HIV and TB interaction?
   (a) TB epidemic can be worsened by HIV infection if prevalence of the latter is high in the population
   (b) **HIV increases the risk of TB disease by up to 10 fold** ✓
   (c) Multi-drug resistant TB and extensively drug resistant TB have been implicated in HIV patients

(d) Mortality of TB could be higher in HIV infected than HIV negative patients
(e) Atypical presentation of TB is more common in HIV coinfected patients

6. Which of the following is not true about general principles of TB treatment in HIV patients?
   (a) Absence of microbiologic proof should not preclude TB treatment in clinically compatible setting
   (b) Directly observed treatment should be followed as a rule
   (c) A four-drug regimen of rifamycin, isoniazid, pyrazinamide and ethambutol is the standard first-line treatment
   (d) **Six months TB therapy is often adequate** ✓
   (e) None of the above

7. Which of the following is incorrect about TB-related immune reconstitution inflammatory syndrome (IRIS) in HIV setting?
   (a) IRIS in TB/HIV coinfected patients is similar to the paradoxical reaction in HIV negative subjects
   (b) Unmasking of subclinical TB after initiation of HAART can occur
   (c) Other conditions such as treatment failure from drug resistance need to be excluded when considering IRIS
   (d) A rise in CD4 supports IRIS
   (e) **Occurrence of disease in another site compared with original presentation excludes IRIS** ✓

8. Which of the following is incorrect about infection control in TB/HIV coinfection?
   (a) The same principle of infection control for TB in HIV negative subjects applies
   (b) Isolation for multi-drug resistant TB should last till sputum conversion
   (c) Early suspicion of active TB facilitates prompt respiratory isolation
   (d) Adequate air change and appropriate personal protective equipment are important components
   (e) **None of the above** ✓

9. Which of the following is not true regarding TB treatment in a patient not yet on anti-HIV therapy?
   (a) **TB treatment and highly active antiretroviral therapy (HAART) should be started simultaneously** ✓
   (b) Advanced immunosuppression calls for earlier initiation of HAART
   (c) Concomitant HAART and TB treatment initiation runs a higher risk of adverse drug events
   (d) Tolerance to TB drugs is one factor to consider on the timing of HAART
   (e) Being a life-long treatment further complicates HAART initiation as compared to TB treatment

10. Which of the following statement is not true concerning treatment of TB/HIV coinfection?
   (a) Anti-TB treatment takes priority over anti-HIV treatment initiation when TB disease is diagnosed
   (b) Reduction of protease inhibitor concentration by rifamycin is a concern that needs attention
   (c) HAART can often be continued but regimen may need to be adjusted when incident TB is diagnosed
   (d) Protease inhibitor may increase the toxicity of rifamycin such as hepatotoxiciy through inhibition of cytochromc P450 enzyme
   (e) **None of the above** ✓