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EDITORIAL

TB/ HIV co-infection

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The vicious interaction between the human immunodeficiency virus (HIV) infection and tuberculosis (TB) pandemics poses special challenges to national control programs and individual physicians. Although recommendations for the treatments of TB in HIV-infected patients do not significantly differ from those for HIV-uninfected patients, the appropriate management of HIV-associated TB is complicated by health system issues, diagnostic difficulties, adherence concerns, overlapping adverse-effect profiles and drug interactions, and the occurrence of paradoxical reactions after the initiation of effective antiretroviral therapy.

The key biomarker determining when an HIV patient would receive anti-retroviral treatment is the blood level of CD4 T cell, a subclass of immune system T cells most affected by HIV/AIDS.

Currently, WHO guidelines recommend that HAART treatment begin when the CD4 cell count drops below the level of 200 cells per micro liter of blood. That is the threshold observed in most developing countries where anti-retroviral drugs are available. However, the recommended entry point for treatment in developed countries is often much earlier. For instance, the US Centers for Disease Control (CDC) recommends that anti-retroviral drug therapy begin when the CD4 indicator drops below 350 cells per micro liter.

Onyebujoh noted that "There is no doubt that when properly used, ARV treatment is making an impact on mortality and morbidity", however, we need more systematic evidence to tell us how and at what entry points to use anti-retroviral drugs, especially among patients also suffering from TB (1).

Our opinion is that waiting until patients become symptomatic may reduce the impact of the intervention. In addition, the immune systems of many people living in developing countries may have already been chronically challenged by other diseases, ranging from malaria to hepatitis and other viral infections, resulting in less than an optimal immune response to new infectious diseases. By the time someone gets to the recommended entry pint for anti- retroviral treatment, there may have been irreversible immunological damage. The reduction in viral load may not be associated with the expected immune reconstitution. Thus, if in a randomized control study we commence treatment for HIV/AIDS patients whose cell counts are above 200 cells per micro liter, we may note the benefits on mortality and morbidity.

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Onyebujoh acknowledges that there are concerns among some researchers that the benefits of such an approach may be outweighed by major adverse events and poor compliance problems, potentially leading to drug resistance and reduced long term efficacy of anti-retroviral drugs while these concerns are valid, there is a need to systematically evaluate these possibilities in well designed studies, he notes (2).

The Tropical Diseases Research–sponsored trial will thus involve groups of HIV patients with CD4 counts in the range 220-500 cells per micro liter, as well as patients who are infected solely with either HIV or TB, so that further refinement of the analysis by individual disease is possible. This latter segment involves safety evaluation through well-designed pharmacokinetic studies.

TB drugs will be initiated immediately in all of the patients with bacteriologically confirmed TB cases. HAART treatment will be initiated right away in one-half of the HIV infected patients, while the control group will receive a placebo for the six-month duration of the TB treatment (3). Thereafter all HIV co-infected patients will receive anti-retroviral therapy and a commitment from governments participating in the study that all trial participants will receive those drugs for life.

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