Antiretrovirals Reduce AIDS Deaths, But Some Illnesses Remain Serious

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People who begin antiretroviral (ARV) therapy before their CD4 cells drop below 200 have a significantly reduced risk of developing an AIDS-defining opportunistic illness (OI), but some OIs remain deadly, according to a study published online March 10 in the journal *Clinical Infectious Diseases*.

Numerous studies have reported the significant reduction in AIDS-related OIs since the introduction of combination ARV therapy. While many studies now focus on the risk of non-AIDS-related diseases that can affect people living longer with HIV, AIDS-related OIs are still a risk to some people on ARV treatment. Yet not many recent studies have explored the most common, and most deadly, OIs among HIV-positive people who receive ARV treatment and have moderately healthy immune systems.

To determine the impact of ARV initiation on deaths from AIDS-related illnesses, researchers with the Antiretroviral Therapy Cohort Collaboration examined the medical records of 31,620 HIV-positive patients from 15 cohort studies around the globe. All of the patients started ARV therapy before December 31, 2004, and none had been previously diagnosed with AIDS. The average CD4 count before starting ARV therapy was 256.

Over an average follow-up period of 43 months, 2,262 people developed an AIDS-defining illness and 377 died after such a diagnosis. The most common illnesses were esophageal candidiasis, *Pneumocystis jiroveci* pneumonia (PCP), Kaposi's sarcoma (KS), pulmonary tuberculosis (TB) and non-Hodgkin's lymphoma (NHL). The average time from ARV initiation to the development of an AIDS-defining illness was nine months

Though relatively few people died after being diagnosed with an AIDS-defining illness, certain illnesses were more likely to be associated with deaths, including NHL and progressive multifocal leukoencephalopathy (PML). Diseases with a moderate risk of death included disseminated *Mycobacterium avium* complex (MAC), AIDS dementia complex, toxoplasmosis and cryptococcosis. All other diseases had a low risk of death among patients using ARV therapy.

The authors acknowledge that because of the way that records were kept, they could not be certain that people who died after diagnosis of an AIDS-defining illness actually died directly as a result of that illness, rather than some other cause. Thus the magnitude of the risk of death could

be somewhat lower than recorded for some of the illnesses listed above.
