Patients Living Longer, Better With Recent Advances in HIV Treatment

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Highly active antiretroviral therapy (HAART) for HIV infection works, allowing patients with access to treatment to live relatively normal life spans, according to a plenary presentation at the 17th International AIDS conference (AIDS 2008) in Mexico City, Mexico from 3-8 August 2008.*

A recently published study reported that a 20-year old individual starting HAART can expect to live for another 43 years on average. Another recent study showed that mortality rates among HIV-positive patients whose CD4 cell counts had reached 500 cells/mm3 became similar to the general population after six years of treatment. “As long as they have access to treatment and take it, HIV patients can live a relatively normal life and fulfill most of their dreams,” said Anton L. Pozniak, MD of Chelsea and Westminster Hospital, London, UK. The caveat is the inequalities between the areas of the world that have access to drugs and those that have little or none.

Development of HAART has evolved since 1995, with about 25 drugs currently available. Data from randomized ARV trials show that 64% to 89% of treatment-naïve patients and 42% to 70% of treatment-experienced patients achieved undetectable viral load (<50 copies/mL). The safety and tolerability of current regimens has also improved, with less short-term toxicity, including diarrhea and dyslipidemia, and less long-term toxicity, such as lipodystrophy. Newer drug formulations are easier to take and there is even a one-pill, once-a-day formulation available.

When to initiate HAART therapy is controversial, with recent guidelines recommending starting therapy for asymptomatic individuals at CD4 cell count 200-350/µL (resource-rich countries) and <200/µL (WHO guidelines). The new IAS-USA guidelines presented at AIDS 2008 recommend starting HAART at CD4 cell count <350/µL in asymptomatic individuals. For patients with CD4 count >350/µL, the guidelines recommend starting therapy based on the patient’s medical condition.

Benefits of earlier treatment include less toxicity, better chance of normalizing CD4 count, lower risk of developing resistance, and fewer opportunistic infections and deaths. Earlier therapy can also prevent non-AIDS-defining complications, including cardiovascular, neoplastic, hepatic, and renal diseases. It is believed that untreated patients are at higher risk for these complications because of increased inflammation of blood vessels and increased blood coagulation caused by HIV. The START randomized study is planning to evaluate this issue by comparing a cohort starting therapy at >500 cells/µL versus one starting at <350 cells/µL.

“The other message is that once you are on therapy, do not stop it,” said Dr. Pozniak. Both the SMART and DART studies showed that HIV-infected patients who interrupted treatment had a 2.6 times greater relative risk for AIDS or death compared to those who stayed on therapy (P <10-4).

The current guidelines recommend starting therapy with a boosted protease inhibitor (PI) or a non-nucleoside reverse transcriptase inhibitor (NNRTI) together with a nucleoside reverse transcriptase inhibitor (NRTI) backbone. In most resource-poor countries an NNRTI is given first and a boosted PI is only given second-line. Factors affecting choice of NRTI backbone are toxicity, cost, and availability. The choices include tenofovir (TDF)/emtricitabine (FTC), abacavir (ABC)/lamivudine (3TC), and stavudine (d4T) or atazanavir (ATZ)/3TC. There is a higher risk of lipoatrophy with d4T and AZT; AZT also is associated with anemia. Up to 1% of patients develop renal toxicity while on TDF, while ABC is associated with increased risk of cardiovascular disease.

Studies show that the likelihood of achieving undetectable viral load is highest with more than two active drugs in a regimen and if a new drug class is used. New classes of drugs include integrase inhibitors (raltegravir) and CCR5 antagonists (maraviroc). Maraviroc was not as effective as efavirenz in treatment-naïve patients, but this might be explained by inaccurate CCR5 testing in patient selection. The 96-week data for raltegravir is promising and a large comparative study in treatment-naïve patients is under way.

“Treatment works if you have access and if you stay on it,” concluded Dr. Pozniak. “But today’s reality is that for every new person starting treatment, two to three more are newly infected. A prevention and treatment partnership is crucial to fighting the epidemic. Access to a wide range of ARVs is needed to treat patients wherever they live in the world.”

*Pozniak AL. Recent advances in treating HIV infection: What’s new since IAC 2006? AIDS 2008. Plenary Session THPL0101.

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