

High Active Antiretroviral Therapy for HIV/AIDS-Early Intervention or Later Intervention?

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It has been nearly 15 years after the invention of High Active Anti Retroviral Therapy (HAART). Before the availability and widespread use of HAART, almost all AIDS people died of an infection or cancer that was related to HIV infection. With HAART, fewer people with AIDS die of these conditions. More infected patients live longer and eventually die of causes that are unrelated to HIV infection. Now HAART become the standard of care for HIV infection [1].

Whether the HAART Should be used Immediately or in Stage of AIDS Symptom Occurrence?

However, there is a longstanding debate-whether the HAART should be used immediately after HIV virus is diagnosed or HAART should be used after AIDS symptoms occur or the cell counts of CD4 lymphocytes in patients is below 200-250 per cubic millimeter. We may reflect that almost all diseases should be treated as early as possible by conventional logic. So most people believe HAART should be given as early as possible.

Early Antiretroviral Treatment as Prevention

Last year, Cohen et al. reported the prevention of HIV-1 infection with early antiretroviral therapy than later antiretroviral therapy in married serodiscordant couples [2-3]. It was regarded as the first important discovery of all science worldwide in 2011 by Science. So early intervention of HIV with HAART seems logical [4].

Drug Toxicity and Resistance as Arguments for Later HAART Therapy

However, HAART has serious side effects, including medication-induced diarrhea, getting thin in parts of their bodies, lipodystrophy, mitochondrial toxicity, peripheral neuropathy, osteoporosis [5-6]. Patients need unwieldy pill burdens, complex dosing schedules and high costs. So many patients can not adhere to HAART and discontinuation of therapy after the symptoms have been ameliorated [7]. Also, viral drug-resistance might occur in patients with therapy discontinuation or long-term exposure to drugs. It means to shorten drug treatment term and duration might make HIV virus less easily producing drug-resistance in patients with HAART. In the other hands, since some of

drugs in HAART have high toxicities, drug-induced deaths are also possible. We argue herein that we still need cautious in early HAART intervention.

Understanding the Genetic Pathogenesis and Cause of AIDS Patients

Until now, we still can not be sure whether HAART should be given early or later. It is because our understanding of the genetic pathogenesis of HIV in patients is lacking. We do not know why patients are killed by HIV. Our previous hypotheses suggest that penetration of HIV virus into human genome is the cause of human death [8-9]. This needs further experimental work to support. If we can understand the cause of AIDS patient, we can decide whether HAART should be given early or later.

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