Data on HIV Disease Prognosis 5 Years After Initiating HAART

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The U.S. Centers for Disease Control (CDC)'s current recommendation for initiating antiretroviral therapy (ART) is based largely on data from observational cohorts. There is strong evidence from randomized control trials to support starting treatment in patients with CD4+ cell counts <200, but we still lack data on clinical endpoints in asymptomatic patients with CD4+ cell counts >200. In patients with CD4+ cell counts between 200 and 350, current guidelines recommend that treatment be offered, although controversy exists. Most providers still have to weigh the risks and benefits of therapy.

The ART Cohort Collaboration consists of 12 large cohorts from countries in Europe and North America. The collaboration was established to estimate the prognosis of HIV treatment-naive patients initiating HAART. The 3-year data were previously published in The Lancet.[1] The 5-year data were presented here at the conference.

A total of 20,379 patients were followed up to 5 years. The baseline mean age was 37.5. Thirty-five percent of the patients were female, 40% were men who have sex with men and 15% were intravenous drug users (IDU). Sixty-seven percent of the patients were started on protease inhibitors, while 26% were on non-nucleoside reverse transcriptase inhibitors. The results were divided into 80 risk strata depending on the patients' age (<50 vs. >50), history of intravenous drug use, CDC stage (asymptomatic vs. AIDS diagnosis), CD4+ cell range (<50, 50-99, 100-199, 200-349 and >350) and viral load (<5 log vs. >5 log). Endpoints were considered as progression to AIDS or death, and to death alone.

Based on this model, the probability of AIDS or death at year 5 ranged from 6.5% in patients in the lowest-risk group to 74% in patients in the highest-risk group. The risk of progression to AIDS or death can be calculated by going to www.ART-Cohort-Collaboration.org and plugging the numbers into the calculator. The result can help one make a wiser decision to initiate therapy based on the 5-year AIDS risk. Interestingly, in patients who are <50 years old, non-IDU, asymptomatic, and have a baseline viral load <100,000, the risk of progression to AIDS or death over 5 years was only 1% higher when therapy was started at a CD4+ cell range of 200-349, compared with starting treatment at a CD4+ cell count >350 (6.5% vs. 7.5%).

Abstract:
Prognosis Up to Five Years After Initiating HAART: Collaborative Analysis of Prospective Studies (Oral TuOrC1157)

Authored by:
M Egger, on behalf of the ART Cohort Collaboration

When the authors analyzed the time trends from 1995 to 2003, patients starting HIV medications after 1999 were more likely to achieve a viral load <400. However, this has not translated into a better clinical outcome in recent years. The risk of progression to AIDS or death up to 1 year after starting therapy has remained the same over the past 9 years. The puzzled presenter postulated that this could reflect some changes in patient demographics over the years.

Because these cohort studies are not randomized controlled trials, the presenter warned that we should interpret the data with caution. At least with the risk calculator, we may have some guidance on when to start therapy. We are also reassured that, in younger asymptomatic patients with a viral load <100,000 copies/mL, starting therapy earlier at a CD4+ cell count >350 or waiting until the CD4+ cell count is around the 200-349 range does not seem to make much difference to the 5-year prognosis.

Footnote:

1. Egger M, May M, Chêne G, et al. Prognosis of HIV-1-infected patients starting highly active antiretroviral therapy: a collaborative analysis of prospective studies. Lancet. July 13, 2002;360(9327):119-129.

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