Lamivudine plus zidovudine was an effective initial therapy for HIV-1 infection


Objective
To determine the effectiveness of lamivudine and zidovudine combination therapy compared with zidovudine monotherapy in patients with HIV-1.

Design
24-week randomized, double-blind, placebo-controlled trial.

Setting
14 hospitals in Europe.

Patients
129 patients who were ≥ 18 years of age (mean age 35 y, 74% men) and were infected with HIV-1, had received minimal previous zidovudine therapy (≤ 4 weeks), had a CD4+ cell count between 100 and 400/μL, and had a Karnofsky score ≥ 70. Exclusion criteria were abnormal liver function, neutrophil count, hemoglobin level, platelet count, creatinine level, or serum amylase level; previous anti-HIV therapy other than zidovudine; history of peripheral neuropathy; or intolerance to zidovudine. Follow-up was 88%.

Intervention
Patients were allocated to zidovudine, 600 mg/d, and lamivudine, 300 mg twice daily (n = 65), or zidovudine plus lamivudine placebo (n = 64). After 24 weeks, all patients could receive lamivudine.

Main outcome measures
Change in CD4+ cell count, HIV-1 RNA viral load, and adverse and toxic events.

Main results
Analysis was by intention to treat. At 24 weeks, patients who received combination therapy had an increase in CD4+ cells of 80 cells/μL compared with a decrease of 10 cells/μL in patients on zidovudine monotherapy (P < 0.001). 13% of patients who received combination therapy had a CD4+ cell count below baseline compared with 57% of patients who received zidovudine monotherapy (P < 0.001). (This absolute risk reduction of 44% means that 2 patients would need to be treated with combination therapy (rather than zidovudine monotherapy) for 24 weeks to prevent 1 additional patient from having a CD4+ cell count below baseline, 95% CI 2 to 4; the relative risk reduction was 77%, CI 55% to 89%.) Patients who received combination therapy had a greater mean reduction in viral load at 24 weeks than did patients who received zidovudine monotherapy (P = 0.008 by the immune capture method and P < 0.001 by the Roche method). The groups did not differ for clinical events or toxic effects, which were mild.

Conclusion
Lamivudine plus zidovudine combination therapy was well tolerated and more effective than zidovudine monotherapy in increasing CD4+ cell count and reducing viral load in patients with HIV-1.

Source of funding: Glaxo Wellcome Research and Development and Agence Nationale de Recherches sur le SIDA, France.

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Numbers calculated from data in article.