RETROVIROLOGY

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Treatment outcomes in patients receiving combination antiretroviral therapy

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Background

This study investigated mortality rate, early CD4 responses, pattern of ARVs substitutions and medication adherence of HIV-infected patients on first-line triple combination ART.

Methods

Assessment of 196 HIV-infected patients on combination ART regimens was performed after 18 months of therapy. Medication adherence assessment of 69 follow-up target groups was based on a study-specific questionnaire. Paired sample *t-test* and simple linear correlation were used to test the association of the CD4-cell Counts at different time intervals. Kaplan-Meier model used to assess survival functions and the log-rank test was used to assess statistical difference at 95% CI.

Results

Mean age of participants was 33.6 years (95%CI, 32.05-35.15); 67.9% were females. At ART initiation, 27.0% were at WHO stage II, 47.0% at stage III. Mortality rate (N = 196) was 20.32 deaths per 100 patient-months; 31.6% occurred in <30 days while 52.6% occurred post 120 days of treatment. The meanCD4-cell count (cells/mm^3) at ART initiation was 179.2 which increased to 328.5 at 3 months, 325.6 at 6 months, 357.4 at 12 months, and 366.7 at 18 months, (p < 0.01). Patients started on Stavudine-based or Efavirenz-based regimens were considerably more likely to have that drug substituted, compared to patients started on Zidovudine-based or Nevirapine-based regimens. 73.8% level of adherence was reported after 18 months on ART.

Discussion

In this setting, patients receiving ART showed significant improvements in CD4-cell status but adherence level was relatively poor. A large proportion of the patients presented very late for treatment with very poor baseline parameters. This finding supports the need for a rapid scale-up of counselling and testing for early detection of asymptomatic cases in developing countries. Patients were more stable on Zidovudine-based or Nevirapine-based regimens compared to Stavudine-based or Efavirenz-based regimens. Early mortality rate was high probably due to poor baseline parameters or late presentation for treatment, indicating need for early interventions. The follow-up CD4-cells measurements were not done every 6 months for all patients eligible for repeat CD4-cell Count in accordance to the Nigerian national ART guidelines, hence the need for improvement in the adherence to the national treatment guideline.

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