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HIV type 2-infected persons' response to the anti-retroviral therapy at the komfo anokye teaching hospital in Kumasi, Ghana

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Abstract

Introduction

HAART is a regimen of combination therapy use in managing HIV disease. Its mechanism of action is through the interference with/or disruption of the HIV replicative steps in an infected host. AIDS is caused by HIV-1 and HIV-2, which differ in their pathogenic properties, nucleotide sequence and genetic organization. HIV-2 infection takes longer to induce immune-suppression and AIDS, it is less transmissible, and it is associated with lower mortality than HIV-1 infection. With these differences between HIV-1 and 2, we postulated that a drug supposedly designed and tested to inhibit HIV-1 might not provide enough inhibition for HIV-2.

Objective

The objective was to determine how people infected with HIV-2 alone or HIV-1 and 2 dual-infection will respond to HAART and the relationship between such response and demographic factors such as gender, age, socio-economic status, religion, marital and habitat.

Methods

Patients' demographic data were collected, their HIV sero-status and virus-infected type determined, and CD4-cell kinetics quantified.

Results

Of 103 subjects (41 males and 62 females) studied 90 were HIV-1 seropositive, 7 HIV-2, and 6 HIV-1 & 2 dually-infected seropositive. Prevalence of women and men was highest in the 30-39 and 40-49 age groups respectively. The mean ages of the HIV-2, HIV-1 and HIV-1 & 2-infected patients were 39, 40 and 43 years respectively. The majority of the people tested were those with low economic status as defined by their income. They were also those with little or no education, either widowed or divorced, having Christian beliefs and mainly resident in the urban community.

The mean baseline CD4 T-cell count of HIV-2 patients was 313 cells/ul and this was significantly higher than that of HIV-1 and HIV-1 & 2, which was 190 and 163 cells/ul respectively. During the proceeding 48 weeks on HAART, the increases of CD4 T-cell was significantly higher in both HIV-1 and HIV-1/2 patients than in HIV-2