

Antiretroviral treatment outcomes in patients who received rifampicin together with nevirapine or efavirenz.

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Background: TB/HIV co-infection is a major service challenge in Sub-Saharan Africa. Many countries rely on nevirapine-containing fixed dose combinations as the mainstay of ART. The clinical and virological significance of the reduction in trough levels of nevirapine (NVP) due to interaction with rifampicin is not sufficiently understood.

Objectives: To compare virological, immunological, and clinical outcomes, as well as drug tolerability, in HIV-infected patients who underwent rifampicin-based treatment for tuberculosis concomitantly with combination antiretroviral therapy (cART) containing nevirapine versus patients who received cART containing efavirenz.

Methods: Prospective cohort study of all treatment-naïve adults started on cART in Khayelitsha by the end of 2005. Survival, virological suppression, CD4 count gain, and liver enzyme changes were compared for groups of patients on NVP or EFV, with or without TB treatment. Multivariate regression models were used for analysis.

Results: A lower probability of virological suppression at 18 months was associated with starting NVP when on TB treatment as compared to NVP alone; and with NVP when compared to EFV in patients not on TB treatment. No increased risk of failure was found when starting TB therapy whilst on cART. Increases in CD4 count were equivalent between the groups. Severe hepatic events on NVP were few, and were not associated with concomitant rifampicin use.

Conclusions: Hepatic induction reducing NVP levels might be of particular concern when initiating cART in patients on TB treatment. The differences in virological suppression between patients on EFV and NVP without exposure to TB therapy are an unexpected finding warranting further exploration. Concurrent TB treatment in this cohort has not been associated with inferior outcomes. The lack of association between the concurrent use of rifampicin and nevirapine and increases in ALT are encouraging.