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Adverse effects and regimen switch among patients on anti-retroviral treatment in a resource limited setting in Ethiopia

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Background: Highly active anti-retroviral therapy is the cornerstone of management of patients with human immunodeficiency virus infection. Antiretroviral therapy can prolong survival of patients however this drugs are associated with adverse effects that can affect patient adherence and if severe may require regimen change. The aim of the study is to assess the prevalence of anti-retroviral associated adverse effects and management strategies undertaken among patients taking anti-retroviral therapy in Jimma University Specialized Hospital. **Methods:** A retrospective review of patient medical records (2009-2011) was done to assess adverse effects associated with anti-retroviral therapy. A sample of 403 patient medical records was selected using systematic random sampling method. Data was collected using structured data abstraction format. Data were entered into SPSS windows version 16 and Chi-square test was used to analyze factors associated with adverse effects. P-value of less than 0.05 was considered as statistical significant. **Results:** About 65.5% of patients had developed at least one adverse effects. Severe side effects that resulted in high rate of regimen switch and discontinuation included anemia, peripheral neuropathy, rash and hepatotoxicity. **Conclusion:** Majority of patients taking anti-retroviral therapy experienced mild to severe adverse effects in the course of treatment which can affect the patient treatment outcome. Thus close monitoring of toxicities considering the risk-benefit ratio of continuing, switching or discontinuation of treatment is critical.

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Four days a week or less on appropriate anti HIV combinations provided long term optimal maintenance in 94 patients

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Background: Short intra-weekly cycles of anti-HIV combinations have provided intermittent yet effective therapy. The concept is now extended to 94 patients on treatment (Rx) 4 days a week (d/wk) or less over a median 2.7 discontinuous treatmentyears per patient. Patients & Combinations: On steadily suppressive combinations, 94 patients volunteered to 5 and 4 d/w treatment, or directly reduced stepwise to 4, 3, 2, 1 d/wk in respectively 94, 84, 66, 12 pts, on various triple (standard) or nonregistered quadruple antiviral combinations. Results: 4 d/wk RX aggregated 165 intermittent treatment-years recording no failure over 87 average Rx-weeks per patient; with 63/94 pts successfully passing the 144 weeks bore on any of the antiviral combinations prescribed. On highly (3d/wk) or ultra (2 d/wk) or hyper (1d/wk) intermittent Rx, HIV RNA surged >50 copies 4 weeks apart in 18 instances (6.8 viral escapes / 100 discontinuous maintenance-years), relatable to: Erratic adherence to regimen or follow-up (3 patients); base-drug at ½ the daily recommended dosage (8 pts); and/or overlooked archival resistant HIVs from antecedent treatment failures (6pts). Aside from such human blunders, HIV unexpectedly rebounded in 3 and 1 patients respectively on 2 and 1/d/wk Rx, = 2.2 intrinsic viral escapes per 100 ultra-hyper intermittent treatment-years. All 18 escapes were countered by 7 day-a-wk salvage combinations and 11/18 has been back to a second course of intermittent therapy 4 days a week or less. Both cell-activation markers on the surface of T- lymphocytes, and cell-bound HIV DNA levels remained stable or declined. CD4/CD8 ratios rose to ≥ 1 in 35% of patients, while CD4 counts went $\geq 500/\mu l$ in 75% - from 7% and 40% respectively on unremitting therapy. Conclusion: In our aging, long-HIV enduring, multi-treated patient cohort, ICCARRE cut into current overmedication by 60%, offering the equivalent of 3 drug-free/ 3 virus-free remission years per patient \approx 3 million Euros unspent for just 94 patients, at the cost of 2.2 intrinsic viral failures per 100 ultra-hyper intermittent treatment-years. On-treatment 4 days a week would universally provide 40% cuts in dispensable medications at no risk of failure.

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