

Comparative pharmacokinetics and compliance issues to optimize art- The Indian scenario

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Introduction: The majority of HIV cases in Asia lives in the Indian subcontinent. Even though the antiretroviral drugs have seen tremendous upgrading over the years since Zidovudine was first marketed, patient compliance is still a major problem. The unavoidable, numerous side effects of the drugs makes it hard for the patient to live a normal life. Developing a better combination of antiretroviral drugs will not only improve the quality of life of the patient but also reduce the chances of patients discontinuing the treatment, which would give appalling results including virologic and immunological failure. Newer group of drugs like TAT inhibitors also hold promises of better compliance with few adverse effects. Therefore, a thorough study of the pharmacokinetics of the antiretroviral drugs to bring out the best combination that will increase the patient compliance and thus control the disease is very essential.

Patients and Methods: The study included 83 patients from the teaching hospital and nearby outreach centers. The patients' case sheets were reviewed upon their ART therapy correlation with CD4 counts, presence of opportunistic infections, adverse drug reactions and all relevant documented parameters. A questionnaire on drug compliance behavior was taken.

Discussion: The ART regimen needs to be changed when virologic failure is noted. Drug toxicity and poor compliance necessitates change of therapy. Present ART has brought down the mortality and morbidity with HIV, but the lifelong use of drugs is suppressed by adverse effects and adherence. Hence the concept of structural treatment interruptions has been the goal in order to induce long term immune control of HIV. Moreover, STI would reduce drug toxicity, pill burden and save on cost. This is based on CD4 T cell guided treatment interpretation of short cycles of 'on/off' therapy strategies of fixed duration. In fact, efavirenz, emtricitabine and tenofovir are advocated for 5 days with 2 days discontinuation. The question arises in cases of virologic failure with drug resistance. STI before initiation of optimized ART in patient with multidrug resistance does not have impaired virologic or immunologic response for treatment failure is most often due to drug resistance. Stavudine, lamivudine and emtricitabine is the commonly used FDC. Cost effectiveness is another matter of paramount practical importance. Global funding is easing the problem. Pharmacogenetics markers to predict ADR in patients is a useful tool along with TDM therapeutic drug monitoring.

Conclusion: The Indian scenario is bereft of data related to compliance, therapeutic drug monitoring, adverse drug reaction documentation and efficacy determination. The study reveals limited compliance of patients on ART with preponderance of protease syndrome. The clinical ramification of protease syndrome in this sarcopenic population is tantamount to increasing the already increasing cardiovascular disease burden.

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