

Efavirenz/Emtricitabine/Tenofovir Disoproxil Fumarate Triple Combination Tablet

A Viewpoint by Paul Volberding

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Antiretroviral therapy of HIV infection has made substantial progress since the advent of potent, three-drug combinations a decade ago. Current regimens are more effective and remarkably less toxic than those originally used; they are also more convenient, with increasing numbers of agents prescribed once daily without dietary restrictions. Drugs that caused feared adverse effects, such as irreversible facial lipoatrophy, are now seldom used, and many patients today have reason to expect durable control of their chronic HIV infection with acceptable, if still very real, toxicities.

One key element of the improved convenience of HIV therapy has been the co-formulation of multiple drugs in a single pill. This simplifies therapy, enhances adherence and, in some healthcare systems, decreases the cost to the patient by reducing 'co-pays' (i.e. fees charged per prescription filled). The most prescribed two-drug nucleoside reverse transcriptase inhibitor pairs used as the 'backbone' of antiretroviral regimens are already available as single-pill co-formulations.

The most recent and striking example of a fixed-dose co-formulation is the release of the first pill that contains all three agents of a triple drug regimen taken once daily. Already an extremely popular HIV treatment, the combination of tenofovir disoproxil fumarate (DF), emtricitabine and efavirenz is considered a preferred combination in antiretroviral treatment guidelines issued by the US Department of Health and Social Services and by the International AIDS Society (USA). Currently, this regimen requires two pills (one each of efavirenz and a fixed-dose co-formulation of tenofovir DF/emtricitabine) once daily. Now, with the historic agreement between the two companies producing these drugs, all three agents have been combined in a single pill. Co-formulation has not reduced the absorption of any of the components, so there is a reasonable expectation that the triple combination tablet will continue to be extremely potent in HIV suppression.

While co-formulation does not eliminate the adverse effects of the individual agents (which require continued vigilance), it nonetheless represents another step to improve medication convenience, which is key in chronic disease management, and may well assist in achieving the high level of medication adherence needed for long-term HIV treatment success. It is hoped that the cooperation between otherwise competing pharmaceutical companies evidenced in this triple co-formulation can be replicated in other antiretroviral combinations. ▲