Do family practitioners know enough about anti-retroviral drugs?

The primary goals of anti-retroviral regimen are to suppress viral load, restore the body's immunological function and reduce HIV-related morbidity and mortality. These drugs suppress the replication of the human immuno-deficiency virus (HIV) in new cells of the body by inhibiting important viral enzymes. The main groups of these drugs are:

a. Nucleoside analogue *reverse transcriptase* inhibitors (**NRTIs**), which act on the early stages of HIV replication e.g. Zidovudine; Lamivudine, Didanodine
b. Non-nucleoside analogue *reverse transcriptase* inhibitors (**NNRTIs**), which also act on the early stages of HIV replication e.g. Nevirapine
c. Protease inhibitors (**PIs**), which inhibit the enzyme *protease* required for the late stages of HIV replication e.g. Indinavir, Nelfinavir,
d. The drug - Hydoxyurea (**HU**) is used as an adjunct to inhibit the cellular enzyme *dideoxynucleotide reductase*, thereby reducing intracellular ATP levels and enabling preferential uptake of anti-retroviral drugs like didanosine into the infected cells.

It is an established fact that all anti-retroviral drugs are associated with several side effects, mostly reported from patients with advanced disease and longer treatment courses.[1] These include:

a. **NRTIs:** myelosuppression, nausea, vomiting, pancreatitis, headaches, peripheral neuropathy, lactic acidosis and neuropsychiatric manifestations
b. **NNRTIs:** nausea, vomiting, allergic reactions and neuropsyciatric manifestations
c. **PIs:** nausea, vomiting, insulin resistance and neuropsychiatric manifestations
d. **HU:** myelosuppression, nausea and vomiting

In HIV-infected patients, combination regimens have proved to be superior to monotherapy regimens in reducing HIV viral load and increasing the CD4+ count. [2,3]

However, resistance of HIV has been reported to all available anti-retroviral drugs.[4] In addition, it is known that there is cross-resistance within classes of anti-retroviral drugs. Despite these short comings, guidelines for the treatment of early HIV infection still recommend the use of these drugs i.e. two NRTIs and a PI.[5] The recommended regimen for HIV post-exposure prophylaxis following a needle stick injury prescribes a 28-day course of Zidovudine and Lamivudine for low risk exposure, and Zidovudine, Lamivudine, and Indinavir for a high risk exposure (Table I).[6] The long-term management of HIV-infected patients involves regular measurements of viral load, CD4+ counts, monitoring of clinical features and a triple regimen (Table II, overleaf). The viral load is a major determinant of disease progression, while the CD4+ count is the best predictor of prognosis or development of an AIDS-related complication.

There are other important issues to consider when prescribing anti-retroviral drugs and these include the following:

- The combination of NNRTI and PI results in sub-therapeutic plasma concentration of the protease inhibitor
- The combination of AZT and HU causes additive bone marrow toxicity
- Lamivudine and zalcitabine are antagonistic in action
- HU is not registered for use in HIV infection in South Africa

From this short presentation, it is quite obvious that the family practitioner needs to be more informed on anti-retroviral drugs before taking up the challenge to treat HIV-infected patients. For any doctor to venture into the conundrum of uncertainty with these

Table I: ***Recommended regimen for HIV post-exposure prophylaxis***

Risk Category	Anti-retroviral drugs	Duration
Low risk	Zidovudine (200mg 8 hourly) + Lamivudine (150mg 12 hourly)	28 days
High risk	Zidovudine (200mg 8 hourly) + Lamivudine (150mg 12 hourly) + Indinavir (800mg 8 hourly)	28 days

drugs without enough evidence-based information to aid decision-making is tantamount to malpractice. Documentation of resistance of HIV to all available anti-retroviral drugs should caution their usage. For the family practitioner to be competent to prescribe anti-retroviral drugs, CPD providers must organize up-to-date and evidence based courses on the benefits and risks of these drugs on the well being of HIV-infected patients. Until this is achieved, the question on adequate knowledge about anti-retroviral drugs may remain unanswered.

Table II: ***Triple combination therapy for HIV-infected patients***

Regimen A	NRTI + NRTI + NNRTI	Zidovudine + Lamivudine + Nevirapine
Regimen B	NRTI + NRTI + PI	Zidovudine + Lamivudine + Indinavir

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Letters to the Editor

Fellowship of Academy of Family Practice/Primary Care - FAFP (SA)

To the Editor: It was with great enthusiasm that the Academy and the FAMEC started the FAFP (SA) qualification in 1995-96. Many letters were written to the candidates who successfully completed this qualification about the Academy's plans to gets its recognition and registration with the HPCSA for the Family Physician register. Urgent and immediate efforts were started for the earlier registration with the HPCSA.

Now it has been a long time that nothing has been heard about that. Can you please provide an answer as to how the Academy and the FAMEC are planning to get a legitimate status to this qualification? How far are they with their plans to get its registration and how will it be handled.

Junaid Asghar, Ga-Rankuwa Hospital

I appreciate Dr Ashghar's interest in the FAFP qualification. He is absolutely correct that the Academy's National Council applied for the recognition and registration of this qualification with the HPCSA. This was initiated by the previous Council under the chairmanship of Prof B Sparks and followed up with a letter by myself dated 10 November 1999. The registration was hindered at both times by some technical matters from the HPCSA, which in itself is not insurmountable. Following the engagement of the Academy and the College of Family Practitioners of the Colleges of Medicine of South Africa in a process of unifying academic family practice in South Africa, the Academy in a gesture of goodwill decided not to pursue this particular issue in competition with the MCFP (Membership of the College of Family Practitioners) so as to facilitate the negotiation process. The idea is that the FAFP will be included in a grandfather clause in the new College of Family Medicine. These negotiations are still ongoing and I once again give my undertaking that this particular issue will be highlighted again at our next meeting.

Marietjie de Villiers
National Chairman
SA Academy of Family Practice / Primary Care