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Substituting tenofovir for stavudine in resource-limited settings: there are challenges ahead

We read with interest the opinion paper by Calmy *et al.* [1] about the need to link science and clinical practice in scaling-up antiretroviral therapy (ART) in resource-limited settings. We would like to highlight an important topic that was not addressed in this study. Although there is now a general commitment to move away from stavudine-based ART towards less-toxic combinations, particularly tenofovir, the vast majority of the more then three million individuals in low and middle-income countries today still take stavudine-containing regimens [2]. As these will not be substituted overnight, a high number of patients will remain exposed to the long-term toxicity of stavudine within the years to come. Therefore, there remains a need to develop evidence-based guidelines how to manage these toxicities at all levels of the healthcare system.

When aiming for the routine substitution of stavudine, it should be considered that most patients will have been on ART for a long period and therefore may be at risk for treatment failure. Given the limited access to viral load testing, treatment failure may not have been detected [3]. Substituting tenofovir for stavudine in a person on a failing ART regimen will induce resistance to tenofovir. Therefore, before considering a substitution from stavudine to tenofovir, a rigorous assessment of the efficacy of the ART regimen should be performed, ideally with viral load testing. In case treatment failure is suspected, switching to tenofovir with a protease inhibitor-containing regimen should be considered. Moreover, switching from stavudine to tenofovir in a failing first-line regimen may not be ideal because stavudine may induce the K65R mutation (causing resistance to tenofovir), particularly in patients with a non-subtype B HIV infection [4].

Finally, a recent study [5] from Zambia demonstrated that nephropathy occurs frequently in patients accessing ART programs, and is associated with increased mortality while on ART. Particularly in the absence of the possibility to evaluate renal function, renal toxicity caused by tenofovir could become a new problem for ART roll out programs [6]. Certainly, also in countries with limited resources, there is an urgent need to set up pharmacovigilance programs.

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References

1. Calmy A, Pizzocolo C, Pizarro L, Brucker G, Murphy R, Katlama C. **The marriage of science and optimized HIV care in resource-limited settings.** *AIDS* 2008; **22**:2227–2230.
2. Towards universal access: scaling up priority HIV/AIDS interventions in the health sector – progress report. Geneva: World Health Organization; 2008.
3. Elliott JH, Lynen L, Calmy A, De Luca A, Shafer RW, Zolfo M, *et al.* **Rational use of antiretroviral therapy in low-income and middle-income countries: optimizing regimen sequencing and switching.** *AIDS* 2008; **22**:2053–2067.
4. Hosseinipour M, van Oosterhout JJ, Weigel R, Nelson J, Fiscus S, Eron J, Kumwenda J. **Resistance profile of patients failing first line ART in Malawi when using clinical and immunologic monitoring** [abstract #TUAB0105]. In: 17th International AIDS Conference; 3–8 August 2008; Mexico.
5. Mulenga LB, Kruse G, Lakhi S, Cantrell RA, Reid SE, Zulu I, *et al.* **Baseline renal insufficiency and risk of death among HIV-infected adults on antiretroviral therapy in Lusaka, Zambia.** *AIDS* 2008; **22**:1821–1827.
6. Reid A, Stohr W, Walker AS, Williams IG, Kityo C, Hughes P, *et al.* **Severe renal dysfunction and risk factors associated with renal impairment in HIV-infected adults in Africa initiating antiretroviral therapy.** *Clin Infect Dis* 2008; **46**:1271–1281.

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Trichosporon asahii infection in an HIV-positive patient

Trichosporonosis in advanced AIDS, including in a report of a patient with fatal *Trichosporon asahii* fungemia, was recently discussed by Gross and Kan [1]. The patients reviewed by them had a diagnosis of AIDS and, when reported, an absolute CD4 cell count of 185 cells/μl or less. We recently successfully treated catheter-related