Nephrotoxicity of first-line ARVs in HIV/AIDS patients at the Essos Hospital Center, Yaounde, Cameroon

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In Cameroon, antiretroviral treatments have improved the level and quality of life of infected patients having HIV/AIDS. However, some ART are often accompanied by side effects of renal toxicities. Our aim was to study the evolution of two biochemical markers, serum urea and creatinine, among HIV/AIDS patients under first-line antiretroviral therapy at a local hospital (Essos Hospital Center) to verify the effect of five HAART on renal function in that locality. We had a total of 65 patients infected by HIV/AIDS under five different HAART treatments: AZT/3TC/NVP, AZT/NVP/TNF, 3TC/TNF/EMB, D4T30/3TC/EFV and D4T40/3TC/NVP. The ages were ranging as from 27 years to 75 years. In a general point of view, we noticed an increase in urea serum compared to initial values at the beginning of the treatment. Creatinemia on the other hand increased in all patients under D4T40/3TC/NVP (9 patients) and AZT/NVP/TNF (7-patients) treatments, which is explained by a significant decrease in creatinine clearance as observed in this study. In seven patients (78%) under D4T40/3TC/NVP treatment and three (43%) under AZT/NVP/TNF the glomerular filtration rate even dropped below the threshold of 90 ml/min/1.73 m2 indicating early renal insufficiency. In four (44.5%) patients under D4T40/3TC/NVP treatment, the glomerular filtration rate even dropped below the critical threshold of 60 ml/min/1.73 m2 which indicates moderate renal insufficiency. The biochemical analyses were conducted from blood serums. The biochemical markers were determined retrospectively using the patient's files and prospectively using the patient's serum. In view of these results, HAART treatments by using the protocols D4T30/3TC/EFV and D4T40/3TC/NVP could lead to renal toxicity.

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