CLINICAL TRIALS

Renal safety of TDF as pre-exposure prophylaxis for HIV-1 infection

Use of tenofovir disoproxil fumarate (TDF) as an antiretroviral therapy is associated with declines in estimated glomerular filtration rate (eGFR) in patients with HIV-1 infection. TDF is also used as a pre-exposure prophylaxis (PrEP) in adults at risk of HIV-1 infection, but limited data are available on the risk of TDF-associated renal dysfunction in this population. Now, Jared Baeten and colleagues report reassuring results from a safety analysis of the Partners PrEP randomized controlled trial, which evaluated TDF-based PrEP in 4,640 HIV-1 uninfected heterosexual partners of patients with HIV-1.

The researchers assessed changes in eGFR from baseline in the trial participants, all of whom had normal renal function at enrolment. “PrEP use resulted in a small ($-1.59 \text{ ml/min/1.73 m}^2$, 95% CI -2.44 to $-0.74 \text{ ml/min/1.73 m}^2$)

but statistically significant decline in eGFR that was non-progressive over a median of 18 months and a maximum of 36 months of follow-up,” reports Baeten. “However, use of PrEP compared with placebo was not accompanied by a substantial increase in the risk of clinically relevant ($\geq 25\%$) eGFR decline.”

The researchers conclude that “these data support the safety of TDF-based PrEP in heterosexual populations as part of a comprehensive HIV-1 prevention package.” They highlight the need for further evaluation of the effect of TDF exposure on proximal tubular function in HIV-1 uninfected individuals.

Ellen F. Carney

Original article Mugwanya, K. K. *et al.* Changes in glomerular kidney function among HIV-1-uninfected men and women receiving emtricitabine-tenofovir disoproxil fumarate preexposure prophylaxis: a randomized clinical trial. *JAMA Intern. Med.* doi:10.1001/jamainternmed.2014.6786