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Proteinuria and Albuminuria among a Global Primary CVD Prevention Cohort of PWH: Prevalence and Associated Factors

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Background

Despite improvements in antiretroviral therapy (ART), HIV remains a significant risk factor for chronic kidney disease (CKD). Factors contributing to CKD in people with HIV (PWH) include direct HIV infection of kidney cells, inflammation of the blood vessels, exposure to harmful drugs, co-infections with hepatitis C and B, and other conditions like hypertension (high blood pressure) and diabetes. Traditional tests like serum creatinine (which measures how well the kidneys are functioning) are not sensitive enough to detect early kidney damage, so urine tests for protein and albumin are recommended as they can indicate early kidney disease and help predict its progression.

Goals of the Study

In the Kidney Ancillary Study of the Randomized Trial to Prevent Vascular Events in HIV (REPRIEVE) trial, data were collected to complete a baseline assessment of kidney function parameters. In this analysis, we report on the baseline prevalence of proteinuria (protein in the urine) and albuminuria (albumin in the urine) and assess factors associated with excess proteinuria and albuminuria among a subset of REPRIEVE participants. A future analysis will assess over time the effect of pitavastatin calcium (“pitavastatin”) on changes in kidney function, including estimated glomerular filtration rate (eGFR, a measure of how well the kidneys filter out waste and excess water), proteinuria, and albuminuria.

➤ The participants:

- 2,791 participants
 - 1,144 (41%) women
 - 1,312 (47%) Black or of African origin
 - Median age at enrollment: 49 years
- 2,183 (98%) with viral load (VL) less than 400 copies/mL (of 2,228 with baseline data)

➤ The findings:

- 27% of the participants had abnormal proteinuria at baseline
 - Factors related to proteinuria included: female sex, older age, residence in sub-Saharan Africa or East Asia, lower BMI (body mass index), lower CD4 cell count, and use of the HIV medicine tenofovir disoproxil (TDF)
- 9% of the participants had abnormal albuminuria at baseline
 - Factors related to albuminuria included: a diagnosis of hypertension

In Summary: Abnormal proteinuria and albuminuria remain common (27% and 9%) despite controlled HIV. Lower current CD4 count and TDF use were strongly associated with proteinuria. Hypertension, a kidney disease risk factor which can be treated, was associated with abnormal albuminuria values. In PWH with preserved eGFR, urine tests can help detect early kidney disease and offer a chance to treat kidney disease risk factors in an effort to help maintain normal kidney function.

REPRIEVE Trial Website: reprivetrial.org

The findings shared in this summary are from the REPRIEVE population at a specific point in time. These findings are descriptive and not intended to change clinical care. If you have questions about what you've read, please talk to members of the REPRIEVE study team at your local site or a health care provider