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SERIOUS CLINICAL OUTCOMES IN HIV-POSITIVE PERSONS WITH CHRONIC KIDNEY DISEASE (CKD)

Clinical: (N) Other Complications of HIV Infection and Antiretroviral Therapy

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Background: Risk factors for CKD amongst HIV-positive persons have been well established, but insights into the prognosis after CKD including the role of modifiable risk factors for serious clinical outcomes (SCO) are limited.

Methods: D:A:D participants developing CKD (confirmed, >3 months apart, eGFR<60mL/min/1.73 m2 or 25% eGFR decrease when eGFR<60mL/min/1.73m2) after 2004 were followed from date of CKD date incident SCO (end stage renal (ESRD) and liver disease (ESLD), cardiovascular disease (CVD), AIDS- and non-AIDS defining malignancies (ADM and NADM), other AIDS events or death), 6 months after last visit or Feb 1st 2016. SCO rates in persons with CKD were compared to rates in persons without CKD followed from eGFR> 60mL/min/1.73 m2 to CKD, 6 months after last visit or Feb 1st 2016. Poisson regression models considered associations between individual SCO and modifiable risk factors.

Results: 2467 persons with and 33427 persons without CKD were included. During 2.7 (IQR 1.1-5.1) years median follow-up after CKD 595 persons with CKD (24.1%) developed a SCO (IR 68.9/1000PYFU [95%CI 63.4-74.4]) with 7.9% [6.9-9.0] estimated to have a SCO at 1 year. In persons without CKD the SCO IR was 23.0/1000PYFU [22.4-23.6] with 2.8% [2.6-3.0] estimated to have a SCO at 1 year. In persons with CKD, death was the most common SCO (12.7%), followed by NADM (5.8%), CVD (5.6%), other AIDS (5.0%), ESRD (2.9%), ESLD (1.0%) and ADM (0.8%). In adjusted models poor HIV control (2.72 [2.01-3.69]), low BMI (1.68 [1.14-2.48]), diabetes (1.60 [1.19-2.15]), smoking (1.48 [1.06-2.07]) and higher eGFR (0.74 [0.68-0.80]) were strongly associated with death; poor HIV control (3.05 [1.87-4.95]), low BMI (1.96 [1.11-3.47]) and smoking (1.75 [1.02-3.00]) with other AIDS; smoking (1.78 [1.07-2.99]) and diabetes (1.65 [1.05-2.57]) with NADM; dyslipidaemia (2.22 [1.40-3.52]), smoking (1.98 [1.22-3.19]), diabetes (1.81 [1.16-2.81]) and higher eGFR (0.81 [0.72-0.92]) with CVD (figure).

Conclusion: In an era where many HIV-positive persons require less monitoring due to efficient antiretroviral treatment, persons with CKD have a high SCO burden requiring close monitoring. Our data suggest modifiable risk factors including smoking, diabetes, BMI, HIV-control and dyslipidaemia play a central role for post-CKD morbidity and mortality.