ABSTRACT

Chronic kidney disease and HIV infection each constitute a global burden and a large percentage of HIV infected patients present with renal disease of varying types especially chronic kidney disease which has become one of the leading causes of ESRD. It is important to detect these cases of renal impairment early so as to administer early intervention.

Objectives: To determine the prevalence of chronic kidney disease in HIV positive patients, their associated risk factors and the histological findings on light microscopy.

Method: A descriptive cross sectional study was done using a pool of HIV sero-positive patients (who had not commenced HAART) that presented in University of Benin Teaching Hospital from April 2009 to December 2009. Four hundred patients with positive retroviral screening were recruited for the study. Assessment of chronic kidney disease was made with an estimated GFR of less than or equal to 60mls/minute or serum creatinine of > 3.0mg% with symptoms greater than three months. Packed cell volume, electrolytes, urea and creatinine, CD4 cell count, hepatitis B and C screening and urinalysis were some of the investigations done on these patients. Renal biopsy was done with the 18gauge spring loaded Biopsy needle on the HIV positive patients with chronic kidney disease consenting to the procedure provided there were no contraindications.

Results: The prevalence of chronic kidney disease in these HIV positive patients was 30%. Sixty-eight (56.7%) of the HIV positive patients with CKD were females while 52(43.3%) were males; with a M:F ratio of 1:1.3. The prevalence of CKD in HIV patients was commonest in the 40-49years age group with this constituting 31.7% of patients with CKD. The mean age of patients with CKD was 39.28±10.82 with the range from 18 to 60years. The mean PCV for those with
CKD was 22.84±3.76. The median CD4 cell count for HIV patients with CKD was 166.00±120.9/ul, as against 289.62±252.674/ul for the patients without CKD. There was statistically significant difference between the medians, p < 0.0001. The prevalence of hepatitis B infection in HIV positive infection (13.0%) is doubled that of hepatitis C infection (6.5%). Only 5(4.2%) of the CKD patients had hepatitis C infection while 15(12.5%) had hepatitis B infection. 15 patients were biopsied during the period of this study and the histological pattern of kidney disease, on light microscopy, showed 66.7% had focal segmental glomerulosclerosis of the collapsing variant, 13.3% had minimal change disease, another 13.3% had chronic pyelonephritis and 6.7% had membranous glomerulonephritis.

**Conclusion:** Chronic kidney disease is common in HIV positive patients with a prevalence of 30%. The renal histopathology view is in keeping with HIVAN since 66.7% of biopsied cases were focal segmental glomerulosclerosis. All HIV patients at the time of diagnosis should be screened for chronic kidney disease so that early intervention can be done when needed.