Prevalence and relationships of albuminuria among adult HIV-seropositive patients seen at the outpatient HIV clinic (SAGIP Unit) of Philippine General Hospital

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Background: Kidney injury is a complication of Human Immunodeficiency Virus (HIV) infection. Albuminuria, ranging from microalbuminuria to macroalbuminuria, is a marker of renal injury in other systemic illnesses and also an indicator of subclinical renal disease among HIV-seropositive individuals. Recent studies have shown that albuminuria and declining glomerular filtration rates are associated with faster progression to AIDS and mortality. Early detection of albuminuria may benefit from early treatment with drugs that delay progression to end-stage renal disease. There is paucity of studies on the burden of HIV-associated renal complications especially in Asian populations, along with the lack of local data on prevalence of albuminuria among Filipino HIV patients, hence this study.

Methods & Materials: This is a cross-sectional study that determined the prevalence and relationship of albuminuria among 198 adult HIV-seropositive patients seen at the SAGIP Unit of PCH. Urine samples were tested for albuminuria using standard urine dipstick while those with negative, trace and +1 results were further tested for microalbuminuria using urine Micral test. Data was analyzed using structural equation modeling (SEM) to identify relationships of albuminuria with HIV status and HAART use.

Results: Albuminuria was present in 9.6% of respondents, of these, 63% were in the microalbuminuric range. Using SEM, albuminuria was inversely associated with HAART, as those patient not on HAART were likely to have albuminuria (p < 0.003). The relationship of HIV clinical stage and albuminuria was significant with or without HAART, although HAART exerted partial mediation. In terms of duration of therapy, patients with >1 year of HAART were less likely to develop albuminuria regardless of clinical stage (p = 0.000). The duration of HAART had full mediation to this relationship.

Conclusion: This study showed lower rates of albuminuria as well as microalbuminuria among Filipino HIV patients compared to those from the Middle East and Africa. The rate of microalbuminuria was actually comparable with the worldwide prevalence in the general population. This study showed that longer HAART use was related to decreased likelihood of having albuminuria. The authors recommend routine screening for microalbuminuria in HIV-seropositive patients to identify those who will benefit from early intervention.