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### **The Progression of Kidney Disease in HIV Patients**

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#### **Background**

Human Immunodeficiency Virus (HIV) has become a chronic illness, with episodes of exacerbation and recovery, similar to heart failure, chronic obstructive pulmonary disease, and dementia. Important developments have arisen since the introduction of highly active antiretroviral therapy (HAART). However, the frequency of renal diseases, acute or chronic renal failure, that are often not directly related to underlying HIV disease has increased.

#### **Problem**

Renal disease of any stage is a common complication in patients with HIV, affecting up to 30% of patients, and is associated with increased morbidity and mortality. It can be caused because of the harmful effects of HIV on the nephrons in the kidneys, infections, medications used to treat HIV, diabetes, hypertension, recreational drug use, and Hepatitis C, causing a decline in kidney function.

#### **Discussion**

Acute renal failure (ARF) is frequent in ambulatory HIV patients, even in the HAART era, with an incidence of 5.9 cases per 100 patient-years in one study. Chronic kidney disease (CKD) is of increasing importance in the HAART era. In order to identify the disease early, it is recommended that risk-factor assessment and screening for existing kidney disease begin at the time of HIV diagnosis.

#### **Outcomes**

When providing care and educating HIV patients that are at risk for CKD or have CKD, the primary goal is to eliminate the cause; manage the clinical manifestations; control exposure to nephrotoxic drugs; prevent prolonged episodes of hypotension/hypertension and hypovolemia; and monitor input/output and electrolytes. The proper selection and dose-adjustment of antiretrovirals and other commonly used drugs for patients with kidney disease are important components of care for HIV patients.

#### **Conclusion**

The identification and definitive diagnosis of HIV-related and -unrelated kidney disease is critical to patient management. Therefore, nurses and the interdisciplinary team must educate the patient and family with medication regimen, dose adjustments for medications used in treatment of HIV, blood pressure and glucose control, dietary and fluid management, avoidance of nephrotoxins, and kidney replacement therapy.

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