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Perspective

# Acute Kidney Injury by Tropical Infections

**Sreejith Parameswaran***

*Department of Nephrology, Medical College Hospital, Trivandrum, Kerala, India*

## DESCRIPTION

Tropical diseases mainly occur in the tropics of Asia, Africa and Latin America. They cause major public health problems in these areas, most of which are considered neglected diseases and contribute significantly to the development of AKI (Acute Kidney Injury) associated with increased morbidity and mortality in patients. In most countries, tropical disease-related kidney disease is treated with medical services that lack infrastructure and preventative measures. The long-term effects of these infections on kidney tissue can be a major cause of future kidney disease in these patients. Therefore, the study of novel biomarkers of renal disorders in these tropical diseases is of paramount importance in explaining the mechanism of renal disorders, improving their diagnosis and prognosis, and assessing the medical system of these patients. Since 2011, our group has been investigating renal biomarkers for visceral and cutaneous leishmaniasis, schistosomiasis, leptospirosis, and leprosy. This study has advanced knowledge of the pathophysiology of renal disease in the presence of these infectious diseases, contributes to the early diagnosis of renal disorders, and is the main cause of mechanisms leading to nephropathy and clinical complications. It points to sphere, endothelial and inflammatory involvement. Future prospects include establishing a long-term cohort to assess the development of renal disease and patient survival, and the use of new biomarkers such as urinary exosomes to identify risk groups and understand the progression of renal damage. It is included, despite systematic containment efforts, infectious diseases continue to be an important cause of AKI's burden in the tropics. Tropical AKI closely tracks the status of public health services, especially inadequate hygiene infrastructure, lack of precautions, and poor access to health care. Estimating the number of victims is hampered by poorly organized surveillance systems. Since the pattern of organ lesions has not been tracked, estimates of the incidence of kidney lesions are either rough estimates or biased towards patients with progressive disease. These patients are preferentially referred to a tertiary care hospital. In addition to high mortality and morbidity, these conditions place a heavy financial burden on countries that already have limited resources. Increases in tourism, labor, business trips, and displacement due to poverty and war are likely to spread pathogens and carriers that were once confined to one geographic area to previously non-endemic areas. Tropical infections are often diagnosed late in non-endemic areas and have detrimental consequences.

Many patients with tropical infections develop AKI as part of an undifferentiated febrile illness. If there is no clear evidence of common bacterial infections such as Respiratory or urinary tract infections, certain tropical infections should be considered in the differential diagnosis. Not only can untreated infections be fatal, but the incidence of AKI in fever patients can be as high as 41%, so it is very important to be aware of these syndromes. Patients may have additional symptoms associated with other organ systems. Liver, nervous system or heart dysfunction; coagulopathy and thrombocytopenia. Identifying these syndromes can help narrow the list of diagnostic possibilities. Summarize general differential diagnosis of tropical acute thermal disease based on organ participation.

AKI is also indirectly, by the formation of myoglobin disintegrating (rhabdomyolysis), hemoglobin (haemolysis), concentration, free oxygenic group, enzyme (phospholipase and proteases) and additives indirectly possible. Snake bite or insect sting, changes in hemodynamic due to exposure of tropical infections and tropical infections are serum vascular expansion, serum vascular expansion, and lept spirits, with a decrease in hemodynamic discretion of sepsis vascular resistance. This vasodilation results in the activation of the neurohumoral axis, sympathetic and renin angiotensin aldosterone systems associated with non-spontaneous release of vasopressin. As a result, intravenous vasoconstriction with systemic blood vessel dilation that has occurred in severe infection patients (Diarrhea disorders and causes of two normal hypovolaemia of dengue and blood cells) depends on the prison an intravascular compartment contributing to ischemic AKI in patients with hypoglycemia tropical disorders of fluid loss of fluid loss. Acute Cortical Necrosis (ACN) is a rare form that occurs in tropical countries with obstetrial complications, snake bite and hemolytic urinary syndrome, symptoms, conditions occurs in tropical countries. When ACN was rare, ACN was diagnosed at 7.4% of Indian AKI patients. Obstacle complications are due to the 37-71% of ACNs of these individuals. Other common causes of ACN were snakebites, pancreatitis, and hemolytic uraemic syndrome.

Community-acquired pneumonia is a major problem in tropical developing countries. Prevalence and epidemiology of this form of AKI include infectious diseases, unsafe water, predominantly rural

**Correspondence to:** Sreejith Parameswaran, Department of Nephrology, Medical College Hospital, Trivandrum, Kerala, India, E-mail: 4982param@gamil.in

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populations, suboptimal prenatal care, and inadequate regulation of indigenous medical practices, unsafe childbirth and abortion. Many patients in tropical countries with infection-related AKI share similar characteristics and patterns of organ lesions, making it difficult to identify the underlying cause based solely on clinical findings. In addition, lack of easy access to hospitals can delay the diagnosis and treatment of AKI, leading to the high mortality rates reported in developing countries. Long-term renal prognosis is poor in many AKI survivors, especially those with unwanted histological lesions such as ACN. However, community-acquired pneumonia may be preventable in tropical countries. Prevention requires a public health approach that includes campaigns to raise awareness about the provision of clean water, infection control, vector management, better midwifery care, and the safe use of herbs, pesticides and chemicals. Timely referral of established AKI patients to a center with a dialysis facility will improve outcomes.