**Two decades of chronic kidney disease of unknown aetiology (CKDu) research: Existing evidence and persistent gaps from epidemiological studies in Sri Lanka**

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Abstract

Background

Chronic Kidney Disease of unknown origin (CKDu) excludes known primary renal conditions or systemic disease (such as diabetes mellitus or hypertension). Prominence of CKDu has been noted for some decades in Sri Lanka, especially among men in particular rural areas, prompting many studies directed towards environmental causation. This article critically reviews relevant primary studies.

Methods

Articles for this literature review (*n* = 86) were found by searching Medline, Embase, Global Health and ProQuest databases over 2000–2020 utilizing a standard algorithm. Articles were critiqued according to criteria for diagnosis of CKDu, aetiological agents investigated, analytic methods employed and findings.

Results

Criteria for diagnosis of CKDu varied significantly, including pre‐selection by proteinuria, eGFR and biopsy proven interstitial nephritis. Prevalence studies have been largely conducted in the North Central Province, with recent studies demonstrating the presence of CKDu in other regions. Aetiological factors investigated in primary studies included water source, use of agrochemicals, agricultural work, heavy metals, snake bites, ayurvedic medication, heat stress, infectious diseases and usage of tobacco and betel leaf. There is no conclusive evidence for any one aetiological agent despite consistent evidence of distal factors such as male sex, rural residence and farming.

Conclusions

The current body of evidence for any aetiological agent as the cause of CKDu in Sri Lanka is limited. Further research with stronger study designs is necessary to increase knowledge of aetiology of CKDu in Sri Lanka to identify and eliminate exposure to possible causative agent(s) prior to concluding that the disease is multifactorial.

**Keywords:**environmental exposure/adverse effects, global health, nephritis, interstitial, enal insufficiency, chronic/epidemiology, Sri Lanka