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Chronic kidney disease of unknown etiology- South Asian region

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Objectives: Chronic kidney disease of unknown etiology(CKDu) is an emerging major healthcare burden in certain geographical areas over the last two decades. We highlight the clinical course and management of CKDu in South Asia.

Methods: The operative definition of CKDu includes absence of preexisting diabetes mellitus or hypertension, geographical residence in the affected areas, minimal proteinuria, and renal biopsy showing tubulointerstitial disease (Fig 1). The young and middle-aged farming communities of the Northcentral province of Sri Lanka, regions in India include coastal areas of Srikakulam and Prakasham district of Andra Pradesh, Odisha and Goa are among the affected. Various causative associations include exposure to environmental toxins such as residual pesticides, drinking water contaminated with a high concentration of arsenic, cadmium, lead and aluminum. The prevalence rate of CKDu is 16% in India with 21.3% in the Southern part of India and 15.1-22.9% in Sri Lanka.Case detection requires a team effort to form a protocol for periodic community-based surveillance. Genomics, metabolomics, and proteomics of the biopsy, urine and stool samples are being planned to strengthen the efficiency of diagnosis and management as the disease is not similar to the heat stress nephropathy of Latin America.

Results: Prevalence studies and follow up of these population show an uprising trend, hence efforts are being taken by stakeholders to provide clean drinking and cooking water, avoid pesticides and agrochemicals to see the impact of the intervention.

Conclusions: CKDu requires a multi-pronged approach. Efforts should be collaborative with the government, medical profession, environmentalist, to manage CKDu in the geographical areas. Surveillance, early detection, avoidance of nephrotoxins, clean drinking water, limit exposure to agrochemicals are emergent strategies to contain.

Figure 1 - Normal glomeruli and glomeruli with periglomerular fibrosis and dense interstitial inflammation (X100)

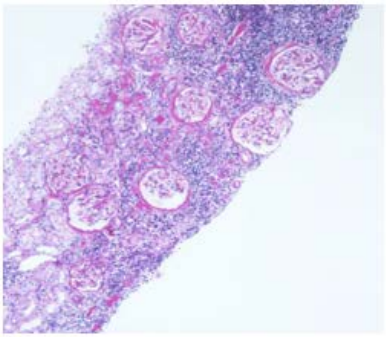


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