

Review of literature in identifying biomarker profile for CKD-U patients in Sri Lanka

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Chronic Kidney Disease due to unknown etiology (CKD-u) is a deadly disease. Its prevalence has been identified in several countries in North Central America, India & Sri Lanka. CKD-u is most pronounced in the North Central Province (NCP) of Sri Lanka. CKD-u is slowly progressive, irreversible and asymptomatic until late stages and is not attributable to hypertension, diabetes or other known etiologies. Current management of CKD-u is based on the evidence obtained from general management of CKD as there is a limitation of clinical data on this specific clinical syndrome. Available limited evidence and extrapolated evidence from other diseases with similar pathological involvement like, Chinese herb nephropathy, analgesic nephropathy, Balken nephropathy suggest that mainstays of management of CKD are not applicable to tubular interstitial diseases. Blood pressure control and proteinuria reduction are good examples. In this background it is highly important to identify the exact natural history, complications and possible therapeutic interventions for better patient care. There are various models to investigate those aspects of a disease and we feel that description of biomarker profiles at various stages of this unknown disease will be a vital step. The present study focused to conduct a literature search to identify available biomarkers which could represent various unknown pathophysiological mechanisms of CKD-u.

Published articles on CKD-u and CKD were reviewed and the most relevant biomarker profile to describe possible biomarker expression in CKD-u was identified. Studies were identified through a systematic search of Pubmed and other websites using key terms: biomarkers, chronic kidney disease; and papers were scrutinized for additional references. According to articles such as Kidney International, Diabetes Care, Nature Reviews Nephrology etc. routine & novel biomarkers were categorized according to their renal relevance for the CKD-u.

In this article, novel biomarkers & routine investigations are critically reviewed and bound with other relevant literature with a view to justify the renal relevance of the selected biomarkers for early identification of CKD-u. This study reviews a most relevant biomarker profile for CKD-u in Sri Lanka.

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