

Letter to the Editor

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We read the article “Escalating chronic kidney disease of multi-factorial origin in Sri Lanka: causes, solutions and recommendations” written by Sunil J Wimalawansa, appeared in *Environmental Health and Preventive Medicine* with great interest [1]. However, there are some critical issues related to this article, which are discussed below.

Wimalawansa has named the unusual type of tubulointerstitial nephritis prevalent among farming communities in rural Sri Lanka, as chronic kidney disease of multi-factorial origin (CKD-mfo). This terminology is contentious. All non-communicable diseases (NCDs) including Chronic Kidney Disease of unknown origin (CKDu) in Sri Lanka are of multi-factorial origin. Therefore, this is neither a new finding nor a new idea. On the other hand, in the case of most NCDs there are a few risk factors that have a higher attributable risk than the others thus contributing more to the disease process. Therefore, by designating CKD as multi-factorial origin, we draw the attention away from these more important and modifiable risk factors.

All the factors related to, and the relative contributions of each factor to any NCD are elusive. Comprehensive understanding about the genetic (G), environment (E) and the G and E interactions to any of the NCDs is absent. Also public health importance of causative factors needs to be considered. Factors such as smoking are highlighted in preventing heart disease because smoking can cause other

diseases in addition to coronary artery disease. Smoking can cause harm to others and it's also modifiable risk factor. Jayasinghe has more appropriately suggested naming CKDu as chronic agrochemical nephropathy because it points towards likely triggers of the disease [2].

There are many other flaws in the facts and figures presented in this article. In the abstract the author indicates that approximately 45 % of the country's paddy fields are located in the North Central Province (NCP). This is erroneous. According to the official government statistics of the ministry of agriculture the share of paddy fields in the NCP is around 20 % [3]. Furthermore, the author states that CKD-mfo currently affects more than 100,000 people and kills more than 5,000 people annually, in Sri Lanka. However, a source for this figure is not cited. The reference that is quoted for this figure is a document related to a lecture delivered by the same author in a high school. Therefore, this figure is just a speculation without any scientific evidence. Official data of the ministry of health Sri Lanka indicate a much lower death rate compared to the values cited in the article [4]. While accepting the fact that the CKD in the dry zone of Sri Lanka is a catastrophic health problem the existing situation should not be exaggerated.

Referring to the Uniqueness of the CKD-mfo and citing his own unpublished results, the author mentions “The prevalence of CKD due to hypertension and diabetes in the NCP is not different from the rest of the country”. The published results show the prevalence of diabetes in NCP is 9.6 % (95 % CI 7.3–11.1) in contrast to 18.6 (95 % CI 15.8–21.5) in Western province [5]. However, there is no published province-wise prevalence data for CKD in Sri Lanka.

Furthermore, Wimalawansa mentioned “Despite the epidemiological studies carried out over the past 40 years other than the reported associations and correlations

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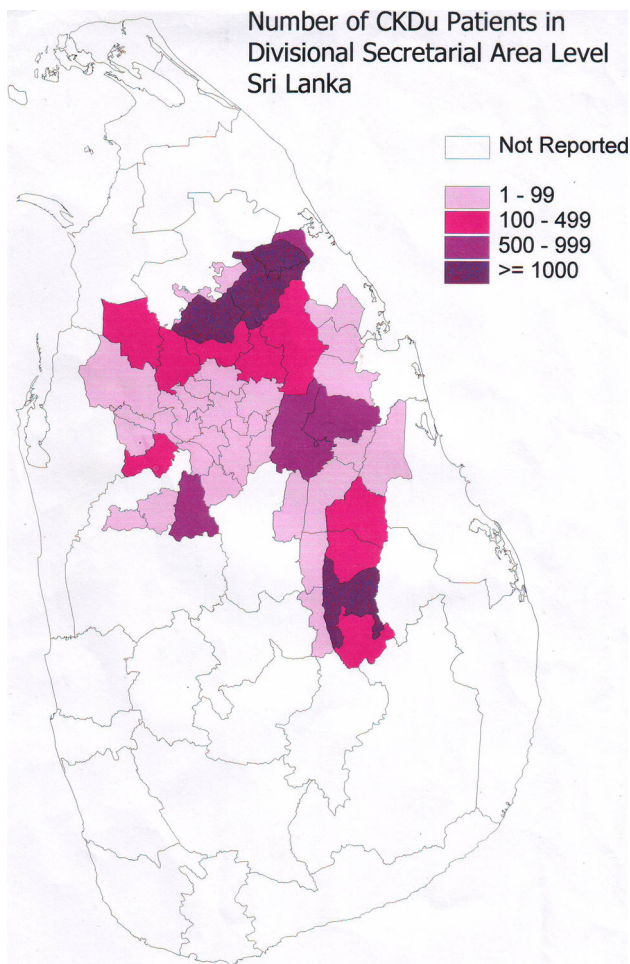


Fig. 1 Distribution of CKDu patients in district secretarial area wise in Sri Lanka

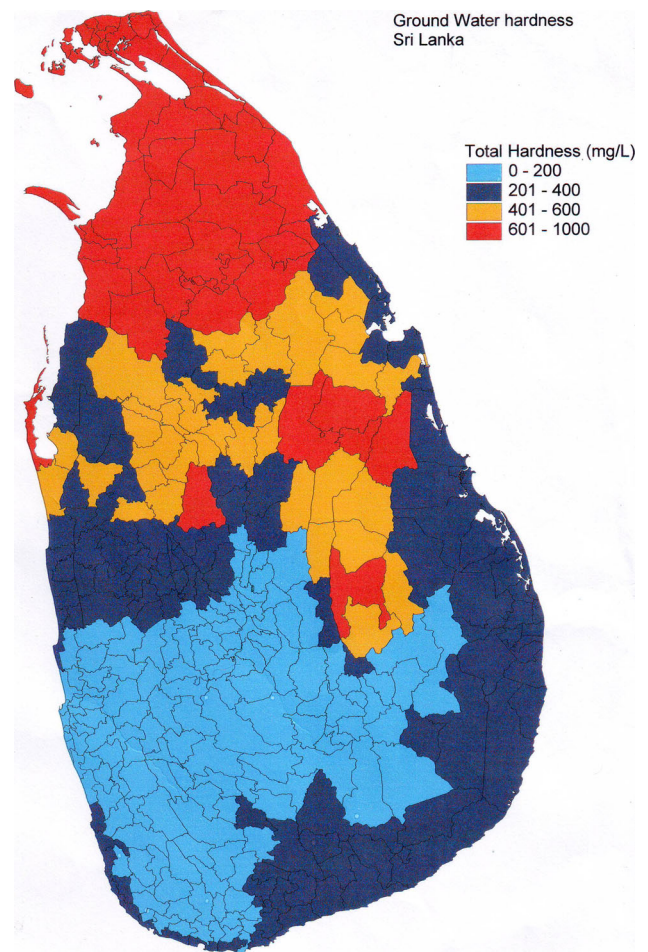


Fig. 2 Ground water hardness map of Sri Lanka

(except arsenic in groundwater, Bihar, India), no causative factor has been identified for CKDu across the continent”. We could not find any reference for the association with arsenic in groundwater to CKDu in Bihar. It may be another unpublished finding by Wimalawansa. Nevertheless we have published the role of arsenic in CKDu in Sri Lanka [6]. Unfortunately the author missed or ignored these findings in his review. At the same time he has mentioned, “None of the postulated hypotheses explains the heterogeneity of the geographical distribution of patients with CKD- mfo”. However, we have discussed this issue in detail in a previously published paper [7].

The author states that “The overall prevalence of those with all CKD in the region is about 12.5 % but of those with CKD-mfo, it is approximately 7.5 % “referring to a previously published paper of his own [8]. However, there are no research findings or data in the quoted publication to support this conclusion.

Wimalawansa mentions “However the reported arsenic levels in rice, water and soil in the endemic dry zone were not

significantly different from those measured in the non-endemic, wet zone of Sri Lanka [2, 19, 33, 48]; thus these findings do not support arsenic as a cause for CKD-mfo [3, 49]”. References 19 (a textbook about social determinants of health published in 1999) and 48 (a report about bone health published in 1999) are not in any way related to the matter under discussion, while reference 49 includes three newspaper articles published in three local news papers written by the same author.

About agrochemical contamination he says “none of the published data including the WHO report failed to identify detectable amounts of agrochemicals including glyphosate in water”. But, the WHO investigators have not measured pesticides in water [9].

Wimalawansa has proposed a program as a part of a long-term strategy to combat CKD. Interestingly these proposed steps are very similar to those published by the “National Project for Prevention of Kidney Disease (NPPKD)” [10]. This was published in a local news paper few weeks prior to the submission of this paper by Wimalawansa [1]. The current authors, CJ is the director and SS is a senior advisor of the NPPKD in Sri Lanka.

Our main concern here is on two maps published in the article [1]. Figure 1 is a map of the geographical distribution of CKDu in Sri Lanka. Figure 2 is a groundwater hardness map. Both maps are prepared by CJ in 2011 and first published in 2013 [6, 7]. We are in possession of the original data used to create these two maps. Both these maps were based upon data generated by the divisional secretariat divisions of Sri Lanka. Wimalawansa has neither obtained permission to reproduce these two maps nor referred to original publications [6, 7]. Hence this amounts to plagiarism. Furthermore, Wimalawansa has altered the legend of the map in Fig. 1. In the original map, prepared by CJ the pink color represented a range between 1 and 99 patients. Wimalawansa has changed this value to indicate a range between 1 and 199; similarly, the red color that indicated a range between 100 and 499 originally was changed to indicate 200–799 patients. In the original map the purple color indicated 500–999 patients. Wimalawansa changed this to 800–1599. Dark purple represented a caseload of more than 1,000 patients. Here again Wimalawansa has changed this figure to indicate 1,600 patients or more. Therefore looking at this data, it is clearly evident that Wimalawansa has altered our original values to create his maps, based purely on speculation. Map in Fig. 2 was also prepared by CJ utilizing the official data made available by the Water Resources Board of Sri Lanka and his own research.

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