

## Debate over whether mystery kidney disease now in food chain

View(s): 101

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Has the “trigger” of the mysterious chronic kidney disease mainly affecting dry zone farmers got into the food chain? ♦ This is what experts are debating and grappling with as “bits and pieces” of the World Health Organisation’s ‘Final Report’ on the ‘Investigation and Evaluation of Chronic Kidney Disease of Uncertain Aetiology in Sri Lanka’ came to light.

While a cross-section of experts cautioned that the WHO report was not conclusive, others urged that the repeated recommendations by the WHO team headed by Prof. Shanthi Mendis that the use of pesticides and fertilisers be strictly regulated should be done immediately. ♦ Prof. Mendis who handles non-communicable diseases at the WHO Headquarters in Geneva, was heavily involved in providing major technical support for the National Research Project on Chronic Kidney Disease of unknown origin (CKDu).

With the report stating that the levels of the heavy metals, cadmium and lead in vegetables and fresh water fish in the CKDu-endemic areas are above the maximum levels stipulated by certain authorities at international level, many experts that the Sunday Times spoke to were concerned whether these heavy metals may have entered the food chain. The report, in the possession of the Sunday Times, has established the overall prevalence of CKDu at 15.3%, higher than reported previously (which ranged from 2% to 8.5%), pointing out that “older age, being female, being a farmer and being engaged in non-paddy cultivation increased the odds of CKDu”.

With regard to the role played by heavy metals, the report states, “We found significantly higher urine cadmium excretion in healthy people in the endemic area compared to those living in a non-endemic area. ♦♦ ..These findings support the contention that chronic exposure to low levels of cadmium may be playing a role in the causation of CKDu in Sri Lanka.”

Referring to arsenic, the report states that “the concentration of arsenic in urine in people with CKDu was above levels known to cause oxidative injury to the kidney ♦♦. Co-exposure to arsenic is likely to aggravate the effect of cadmium on the kidney making the changes more pronounced than exposure to cadmium alone”. Meanwhile, with regard to selenium which “has been shown to protect the kidney from oxidative stress”, the report points out that low selenium levels may have been a contributory factor increasing the susceptibility of the kidneys to oxidative damage caused by heavy metals and metalloids.

Pointing out that their results did not show cadmium levels to be high in water sources, the report said that “on the contrary cadmium levels of all water samples analysed were within normal limits except in one sample from a reservoir which had a borderline level”.

In an interview with the Sunday Times headlined 'Study throws light on NCP farmers' kidney ailments' on July 1, 2012, Prof. Shanthi Mendis said the heavy metals found in urine and nail specimens studied during the research were not from the water that the farmers drank. Therefore, it would obviously be from the food.