

OP 18 - Prevalence of Renal Dysfunction among a Farming Community in Diyatalawa Area – a Pilot Study

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Background: Chronic Kidney Disease (CKD) is a potential health burden globally. Agricultural workers and people drinking stagnant water in reservoirs are at greater risk of developing the disease. In Sri Lanka, prevalence of CKD is on the rise since the 1990's. Screening of CKD among agricultural workers has been studied intensively among paddy cultivators in Sri Lanka, but none has been focusing on the agricultural workers in the hill country.

Objectives: To identify the prevalence of renal dysfunction among a farming community in Diyatalawa area and to identify contributory factors for renal dysfunction if any.

Methodology: A descriptive study was conducted in three Grama Niladhari divisions where vegetable cultivation is done at a considerably high level in Diyatalawa area. 143 farmers were selected by convenience sampling, interviewer administered questionnaire was filled to gather supportive information and serum creatinine of each subject was analyzed on a venous blood sample.

Results and conclusions: Although not at an alarming magnitude, the farming community had a higher chance of getting affected from renal dysfunction showing significance in eGFR values between the farming and non-farming communities ($U = 5426.50$, $p = 0.006$), 30.8% of the subjects of the farming community had impaired renal function whereas it was 15.6% in the non farmers. The data revealed that, impaired renal function was higher in females of the farming community representing 79.5% of the diseased. Exposure to agrochemicals showed a positive impact to renal dysfunction where 80% of farmers who used agrochemicals weekly or more frequently had impaired renal function. Of the farmers who had impaired renal function, 67.5% used less protection during the use of agrochemicals. Among the farmers with impaired renal function, 93.2% drink less than 3 liters of water per day. When both the frequency of use of agrochemicals and the water intake is considered, 68.1% of the farmers who use agrochemicals weekly or more frequently and drink less than 3 liters of water had mildly decreased renal function.

Keywords: Chronic kidney disease, farming community, ground water, serum creatinine