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Family clustering of chronic kidney disease of unknown etiology in Sri Lanka: a preliminary study

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Background: Chronic kidney disease of unknown etiology (CKDu) is a significant public health problem in Sri Lanka. Previous studies revealed that a positive family history (FHx) of chronic kidney disease (CKD) imposes significant risks for CKDu. Main aim of this study is to identify family clustering of CKDu.

Methods: A descriptive cross sectional study was conducted. Confirmed cases of CKDu were recruited from CKDu clinics in teaching hospitals of Anuradhapura and Padaviya. CKDu confirmation and exclusion were based on WHO case definition. A family history (FHx) was defined as having a first degree relative (parents, siblings or children) with CKD.

Results: A total of 262 CKDu patients were interviewed, of which 178 (67.9%) were males. The median age for total the population was 61 (IQ range 54-67) years. Overall, 67 (25.6%) patients had positive FHx of CKD. Patients with affected siblings, parents and children were 43 (16.1%), 15 (5.7%) and 4 (1.5%), respectively. Of the patients reporting an origin from non-endemic area, only 1 (1.4%) had a parent with CKD compared to 14 (7.2%) from endemic areas. Family clustering of CKD was 27.8% (63/227) among farmers compared to 11.4% (4/31) among non-farming patients (Chi-square = 4.246, p=0.039). Parents to sibling CKD ratio were almost 1:3, which exceeds population parent sibling ratio.

Conclusion: These data are more suggestive of an environmental family clustering related to farming rather than to a direct genetic connection.

Keywords: Chronic Kidney disease, Family clustering, Sri Lanka