Prevalence of left ventricular hypertrophy (LVH) and associations in chronic kidney disease of uncertain etiology (CKD-u) Sri Lanka

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[Introduction] CKD-u is an emerging tubular interstitial disease of young hard-working farmers from tropical and subtropical regions.

By definition those patients should not have diabetes, hypertension or vascular diseases at the time of diagnosis. In comparison to

chronic kidney disease (CKD), traditional cardiovascular risk factors are not common among CKD-u other than male dominancy and

higher incidence of smoking.

[Objectives] To identify the prevalence of LVH and associated risk factors in CKD-u Sri Lanka.

[Methods]

This is a cross sectional study. Biopsy proven CKD-u cases (n=119), were selected. All patients underwent 12 lead electrocardiograms (ECG) and echo cardiograms. Age, sex, history of diabetes mellitus, hypertension, current medication, blood pressure, serum

creatinine, estimated glomerular filtration (eGFR) were recorded. Data were analysed using R statistical software.

[Results] Mean age was 52 (±9.52). 81.51% (97) was males where 18.49% (22) was females. 15.12% (18) were observed with LVH.

There was no cardiovascular events, strokes or peripheral vascular disease in the past. 11.76% (14) had evidence of cardiac ischemia, from which 92.86% (13) got possible ischemia and only one patient was observed with definite ischemia. 15 patients were observed with RBBB and one patient with LBBB.

LVH is positively correlated with hypertension (P=0.003), diabetes mellitus (P=0.02), hyperuricemia (P=0), anemia (P=0). Lifestyle

factors of smoking (P=0.008), alcohol consumption (P=0) increases the risk for LVH in these patients.

According to the chi square test of independency, no correlation was observed among LVH and cardiac ischemia. Mean age is significantly higher and mean GFR is significantly lower in LVH positive patients.

[Conclusion]

There are no added CVS risk factors f