APOL1 risk allele variants are absent in Indian Patients with Chronic Kidney Disease

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To the Editor: Apolipoprotein L1 (*APOL1*) gene risk allele variants (G1 and G2) are strongly associated with focal segmental glomerulosclerosis (FSGS), human immunodeficiency virus associated nephropathy (HIVAN) and development as well as progression of chronic kidney disease (CKD) in subjects with African ancestry.[1] India is home to one-sixth of world population and has witnessed a rapid rise in burden of CKD, including that of unknown etiology. Out of many postulated mechanisms, the role of genetic predisposition has been suggested. However, published reports have failed to show *APOL1* high risk variants in any other population.[2] Though an *APOL1* null individual has been described from India, he did not have kidney disease.[3] As there are no data on frequency of *APOL1* risk alleles in the Indian population, we decided to analyze *APOL1* G1 and G2 variants by direct sequencing of 302 base pair fragment in exon region in 159 subjects with CKD enrolled in the pilot phase of Indian Chronic Kidney Disease (ICKD) study.[4]

The causes of CKD and selected clinical parameters in the study population are listed in table 1. Importantly, the cause of CKD could not be ascertained in almost one third of subjects. We did not find *APOL1* risk alleles (G1 and G2) in any subject in our study population. Our findings suggest that *APOL1* is unlikely to explain the development ~~and/or progression~~ of CKD in Indian subjects in our cohort.

Table 1: Characteristics of study population (n=159)

Parameter	Value
Age (years)	45.30±13.52
Gender (M/F)	100/59
Body mass index (kg/m^2)	24.98±5.28
Serum creatinine (mg/dl)	1.75±0.63
CKD-EPI eGFR (min/ml/1.73m^2)	51.32±36.30
Hemoglobin (g/dl)	11.82±2.10
Serum calcium (mg/dl)	9.31±0.85
Serum inorganic phosphorus (mg/dl)	3.87±0.95
Serum albumin (mg/dl)	4.44±0.79
Duration of CKD (months)	41.46±43.42
Cause of CKD	
Unknown	55 (34.6)
Chronic interstitial nephritis	22 (13.8)
Diabetic kidney disease	21 (13.2)
Membranous nephropathy	13 (8.2)
Immunoglobulin A nephropathy	10 (6.3)
Polycystic kidney disease	9 (5.6)
Focal segmental glomerulosclerosis	6 (3.8)
Hypertensive nephrosclerosis	6 (3.8)
Others	17 (10.7)

CKD: chronic kidney disease; CKD-EPI: chronic kidney disease epidemiology collaboration; eGFR: estimated glomerular filtration rate. Figures in parentheses are percentages

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