PULSE PRESSURE AS A PREDICTOR OF CHRONIC KIDNEY DISEASE PROGRESSION.

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Cardiovascular (CV) morbidity and mortality associated with high pulse pressure (PP) necessitates formal evaluation of its role in chronic kidney disease (CKD) progression.

In this cross- sectional study, data were collected from renal clinics and inpatient renal services at our academic centers for the past 5 years. Estimated glomerular filtration rate (eGFR) was calculated using the 4- variable MDRD formula. In 168 patients with complete data, univariate correlation was used to determine associations between age, body mass index (BMI), systolic (SBP) and diastolic blood pressure (DBP), total cholesterol, triglycerides, uric acid, serum creatinine, 24- hour proteinuria (24h- prot) and pulse pressure, followed by step- wise linear regression analysis with eGFR as the dependent variable.

This highly skewed population with advanced CKD (mean eGFR 42.86 ± 2.56ml/min) and heavy proteinuria (mean 24h- prot: 4124.42 ± 355.67mg) was 50.6% white and comprised mostly of men (72.6%) with mean age of 55.48 ± 17.11years. The population had a mean pulse pressure of 64.68 ± 19.67mmHg. Variables with significant Pearson's correlation (r) with the pulse pressure at the 0.01 level (2-tailed) were:

	Age(years)	BMI(kg/m^2)	SBP(mmHg)	eGFR(ml/min)
(r)	0.273	0.249	0.822	-0.24
p- value	0.0001	0.002	0.0001	0.003

Step- wise linear regression analysis systematically excluded BMI, DBP and PP (p- values: 0.537, 0.734 and 0.734 respectively) while age, SBP and 24h-prot (p- values: 0.0001, 0.035 and 0.041respectively) emerged as independent associations with eGFR.

Following a significant negative correlation on univariate analysis, PP was not independently associated with eGFR in this cohort of advanced CKD patients. SBP performed better than PP and together with age and 24- hour proteinuria, was independently associated with eGFR.