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CAROTID INTIMOMEDIAL THICKNESS AS A PRIMARY MARKER OF ATHEROSCLEROSIS IN 100 PATIENTS OF CHRONIC KIDNEY DISEASE AGED ABOVE 50 YEARS

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Objectives : Atherosclerosis is a slowly progressive diffuse degenerative disease of arteries which can lead to various metabolic and cardiovascular complications. However, it can cause early and significant morbidity in patients with chronic kidney disease(ckd) when compared to general population. Indirect evidence of accelerated atherosclerosis in CKD comes from studies measuring carotid artery intima media thickness and clinical and metabolic features in CKD patients

Methods : In this prospective case control study, 100 patients with CKD having a disease duration of more than 5 years were compared to 100 healthy matched controls. All the patients and controls were asymptomatic for atherosclerosis and had no traditional risk factors for atherosclerosis. Both groups underwent high frequency carotid ultrasound and Doppler examination for CIMT in addition to detailed history, physical examination and measurement of other metabolic parameters.

Results : The mean ages of CKD group and the control group were 56±14.4 and 54.6±14.0 respectively. The groups were comparable for atherogenic biochemical risk indices such as body mass index (BMI), systolic and diastolic blood pressure, random blood sugar, and lipid profile. The CKD group had a significant elevation of CRP as compared to the control group (88% vs 15%). The mean CIMT of the CKD group was 0.86 ± 0.18 and that of the control group was 0.53 ± 0.15, a difference which was statistically significant ($p<0.0001$).

Conclusions : CKD is a chronic disease associated with chronic subclinical inflammation. In view of the consequent high risk of atherosclerosis seen in these patients CIMT may serve as an early surrogate marker of atherosclerosis. We can identify these high risk subgroups of patients with a simple, reliable, inexpensive, and non-invasive bedside carotid Doppler sonogram even in resource poor countries such as India. In our view nephrologist should be vigilant to identify and screen regularly for atherosclerosis with CIMT in CKD patients, so that prompt early management can prevent the cardiovascular

complications.

Keywords : CKD- chronic kidney disease, CIMT- carotid intimomedial thickness