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## Study of serum adiponectin levels and its correlation with inflammatory and metabolic markers in predialysis chronic kidney disease patients

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**Introduction:** Persistent, low-grade inflammation plays a unique role in pathophysiology of chronic kidney disease and is accountable for cardiovascular and all-cause mortality. Adiponectin is an anti-atherogenic, anti-inflammatory and insulin sensitizing cytokine. However adiponectin appears to have paradoxical role in CKD patients. Thus its role in CKD needs to be evaluated. **Material:** In this observational cross-sectional study, we measured plasma adiponectin level in 65 pre dialysis CKD patients and investigated its association with some inflammatory (TNF alpha, hsCRP and metabolic determinants (Total cholesterol, HDL, LDL, TG and Fasting Blood Glucose). **Observations:** Serum adiponectin was found to have significant direct correlation with S.TNF alpha ( $r=0.583$ ,  $P<0.0001$ ), LDL-C( $r=0.459$ ,  $P=0.0001$ ). There was significant negative correlation with eGFR ( $r=-0.475$ ,  $P=0.0001$ ), hsCRP( $r=-0.728$ ,  $P<0.0001$ ), BMI ( $r=-0.383$ ,  $P=0.0016$ ) and HDL-C ( $r=-0.125$ ,  $P=0.3215$ ). There was no correlation between adiponectin and total cholesterol. ( $r=0.051$ ,  $P=0.6858$ ), triglycerides( $r=0.103$ ,  $P=0.4139$ ), fasting blood sugar( $r=-0.181$ ,  $P=0.15$ ), age( $r=0.236$ ,  $P=0.0586$ ) and sex of the patient( $p=0.22$ ). **Conclusion:** Although adiponectin has anti-inflammatory and cardio protective role in healthy population, it has pro inflammatory effects in patients of pre-dialysis CKD and further increases the cardiovascular disease risk in these patients. Thus, the role of adiponectin in pre-dialysis CKD patient is paradoxical. To assess the clinical value of adiponectin levels as a potential surrogate of cardiovascular risk in or therapeutic target in CKD, further studies needs to be performed.