Serum Lipid Profiles In Patients With Chronic Kidney Disease In A Saudi Population.

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Background and Objective

Chronic kidney disease (CKD) is an increasing public health issue. Serum lipids might be independent risk factors for CKD. We aim to examine the association of serum lipid profiles, lipid ratios with CKD in a Saudi population.

Methods

We analyzed 3602 participants whom are between the age 18 to 98 years. All patients were from the population of the diabetic centre and Primary health centre at King Fahad Armed Forces Hospital, Jeddah, Saudi Arabia.

Main results

A total of 3602 subjects (the mean age was 49.1 ± 14.1 years, minimum 18 years and maximum 98 years) were included in the analysis. 1358 (37.7%) subjects were men and 700 (19.4%) subjects had CKD. 391 (28.8%) cases were male and 309 (13.8%) cases were female with male to female ratio 2.1:1, P<0.0001. Patients with CKD were significantly older than patients without CKD, (57.1 ± 12.9 vs. 47.2 ± 14.1 respectively, p<0.0001). Mean BMI was significantly higher in patients with than without CKD (31.6 ± 6.4 vs. 30.8 ± 6.9 respectively, p=0.006). Moreover, Patients with CKD have significantly higher prevalence of type 2 diabetes and hypertension than patients without CKD (85.5% and 64.9% respectively, p<0.0001). Patients with CKD have significantly higher mean and percentage of TC, LDL,TG and low HDL than patients without CKD, p<0.0001. Patients with CKD had a higher TC/HDL ratio, LDL/HDL ratio and TG/HDL ratio, than patients without CKD, and all of these differences were significant (p<0.0001). Male had significant higher serum TC, lower LDL and lower HDL than female (p<0.0001). Male had also a higher significant TG/HDL ratio, a higher TC/HDL ratio and nonsignificant a higher LDL/HDL ratio than female. Percentage of TC, LDL,TG and low HDL CKD is non-statistically consistently increasing with age.

Conclusion

Dyslipidemia either TC, LDL, TG and low HDL is high in patients with CKD. Moreover, TC/HDL, LDL/HDL and TG/HDL ratios were significantly high in patients with CKD. Thus, confirming presence of atherogenic lipid profile needing early intervention to prevent cardiovascular complications.