ISSN- O: 2458 - 868X, ISSN–P: 2458 – 8687
Index Copernicus Value: 49. 23

International Journal of Medical Science and Innovative Research (IJMSIR)
IJMSIR : A Medical Publication Hub
Available Online at: www.ijmsir.com
Volume – 3, Issue –4, July - 2018, Page No. : 170 - 172

Study of Lipid Profile in Chronic Kidney Disease Patients of Non Diabetic Etiology

Jitendra Falodia, Associate Professor, Department of Nephrology
Sardar Patel Medical College, Bikaner

Correspondence Author: Jitendra Falodia, Associate Professor, Department of Nephrology, Sardar Patel Medical College, Bikaner

Type of Publication: Original Research Paper

Conflicts of Interest: Nil

Abstract

Background- Chronic kidney disease (CKD) is a growing cause of concern "over a" worldwide scale affecting populations of high, middle and low income countries.

Methods- The study was an observational study. This hospital based observational study was conducted in the patients admitted in the ward under the Department of General Medicine and department of nephrology.

Results- In the study population the prevalence of dyslipidemia as evidenced by abnormal lipid profile is 68 patients had an abnormal lipid profile of which 46 patients were undergoing HD and 22 patients were under conservative management.

Conclusion -The study concludes that, the prevalence of dyslipidemia in non-diabetic CKD is high enough to pose a health problem in the society and this problem of dyslipidemia increases with the severity of CKD.

Keywords- CKD, Lipid profile, Non diabetic

Introduction

Chronic kidney disease (CKD) is a growing cause of concern "over a" worldwide scale affecting populations of high, middle and low income countries. It is associated with significant mortality and morbidity, both, in adults as well as children.

All patients with chronic kidney disease experience a secondary form of dyslipidemia that mimics the atherogenic dyslipidemia of insulinresistant patients. This is characterized by an increase in serum triglycerides with elevated VLDL, small dense LDL particles, and low HDL cholesterol. All of these particles are characterized by triglyceride-rich apolipoprotein B (apoB)- containing complex lipoproteins, which have-a significant atherogenic potential[1] . The prevalence of elevated cholesterol levels (>240 mg/dl) in general population is 20% but in patients with CKD due to nephrotic syndrome it is 90% and not due nephrotic syndrome it is 30%.That of elevated -triglyceride (>200 mg/dl) in general population is 15%, in those with CKD due to nephrotic syndrome is 60% and those with CKD not due nephrotic syndrome is 40%[2-4].

Material and Methods

The study was an observational study. This hospital based observational study was conducted in the patients admitted in the ward under the Department of General Medicine and department of nephrology. A total of 100 subjects was selected after explaining the purpose of the study and procedure in detail and, after attaining their consent in written format. Data collection done by clinical history, examination and investigations. The patients

included in the study were non- diabetic patients who were diagnosed to have chronic kidney disease according to KDOQI (Kidney dialysis outcome quality initiative) criteria. Definition of Chronic Kidney Disease according to KDOQI Criteria Kidney damage for 3 months, as defined by structural or functional abnormalities of the kidney, with or without decreased GFR, manifest by either: Pathological abnormalities; Markers of kidney damage, including abnormalities in the composition of the blood or urine, or abnormalities in imaging tests. GFR <60 mL/min/1,73m^2 for 3 months, with or without kidney damage.

Results

Table 1: Management strategies in the study population.

Category	Number
Hemodialysis	50
Conservative management	50

Of the total 100 patients in the study 50 of them were on maintenance haemodialysis and 50 were on conservative management.

Table 2: Staging of Chronic Kidney Disease (CKD) in the study population

Stage	Number
3	17
4	31
5	52

There are patients suffering from stage 3, 4 and 5 CKD enrolled into the study. Staging was done by calculating GFR thru the MDRD formula. No patients of stage 1 and 2 were found. Stage 5 included all patients undergoing haemodialysis and patients with GFR < 15ml/min/1. 73 m ^{2} who are being managed conservatively at the time of the study.

Table 3: Dyslipidemia and comparison with management strategies

Lipid profile	Number	On Hemodialysis	On conservative treatment	p-value
Normal	32	4	28	0.001
Abnormal	68	46	22	
Total	100	50	50	

In the study population the prevalence of dyslipidemia as evidenced by abnormal lipid profile is 68 patients had an abnormal lipid profile of which 46 patients were undergoing HD and 22 patients were under conservative management.

Discussion

The study consisted of 100 patients of which after evaluation represented the study population adequately in terms of age and sex. The mean age of the population of the study was 51.2±10.20 years. The mean age of the patients undergoing dialysis was 54.6±20.12 years and those under conservative management was 53.20±17.60 years. The variation in distribution of age is not statistically significant and the study population ideally represents the reference population.

It has been observed that the representation of either sex is adequate in the study group with a total of 62 patients being male and 32 patients being female. Of the patient population undergoing HD i.e. 50 patients, 32 were male and 18 female. There is no statistically significant variation in population representation in the study.

The prevalence of dyslipidemia in non-diabetic CKD as calculated in this study is found to be 68% in patients with CKD without any prior history of diabetes. A study among Nepalese population with CKD recorded a higher prevalence of dyslipidemia among CKD patients when compared to the non-CKD control group, and the difference was statistically significant.[5]

Conclusion

The study concludes that, the prevalence of dyslipidemia in non-diabetic CKD is high enough to pose a health problem in the society and this problem of dyslipidemia increases with the severity of CKD.

References

1. Coresh J, Astor BC, Greene T. Prevalence of chronic kidney disease and decreased kidney function in the

adult US population: third national health and nutrition examination Survey. Am J Kidney Dis. 2003;41(1):1-12.

2. Coresh J, Selvin E, Stevens LA. Prevalence of chronic kidney disease in the United States. JAMA. 2007;298(17):2038-47.
3. Foley RN, Parfrey PS, Sarnak MJ. Clinical epidemiology of cardiovascular disease in chronic renal disease. Am J Kidney Dis. 1998;32(3):S112-9.
4. Parfrey PS, Foley RN, Harnett JD. Outcome and risk factors of ischemic heart disease in chronic uremia. Kidney Int. 1996;49(5):1428-34.
5. Poudel B, Yadav BK, Jha B, Raut KB. Dyslipidemia in chronic kidney disease in Nepalese population. Mymensingh Med J. 2013;22(1):157-63.