ORIGINAL ARTICLE

To Determine the Frequency of Hypertension with Raised Low Density Lipoprotein Cholesterol (LDL-C) in Patients of Chronic Renal Failure

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ABSTRACT

Aim: To determine the frequency of hypertension in CRF and to determine the frequency of elevated LDL-C in hypertensive CRF patients.
Study design: Descriptive, cross-sectional study.
Setting: Department of Medicine, Nishtar Hospital Multan.
Duration of study: 01 January 2016 to 31 July 2016.
Results: Our study was conducted on 140 patients, 84(60%) males and 56(40%) females. Among the 140 study cases, 112(80%) were Hypertensive and 28(20%) were Non Hypertensive. Elevated LDL-C was found in 98(70%) and normal LDL-C was found in 42(30%) cases. Among the 84 male cases 49(58.3%) were having Elevated LDL-C and 35(41.7%) were having normal LDL-C. Among the 56 female cases 49(87.5%) were having Elevated LDL-C and 7(12.5%) were having normal LDL-C. Among the study cases, who were Hypertensive, Elevated LDL-C was found in 84 (75%) cases and Normal LDL- C was found in 28(25%) cases. Among the study cases, who were Non Hypertensive, Elevated LDL-C was found in 14(50%) cases and Normal LDL-C was found in 14(50%) cases.
Conclusions: Very high frequencies of Hypertension and Elevated LDL-C were observed in Chronic Renal Failure. Elevated LDL-C was more frequent finding in CRF patients with Hypertension than in CRF patient without Hypertension, and this difference was statistically significant.
Keywords: Chronic renal failure, End stage renal disease, Hypertension,

INTRODUCTION

The term chronic renal failure (CRF) applies to the procedure of proceeding with noteworthy irreversible decrease in nephron number and ordinarily relates to ceaseless kidney illness stages 3– 5. Endless kidney ailment includes a range of various pathophysiologic forms related with irregular kidney work and a dynamic decrease in glomerular filtration rate. It traditionally creates over a time of years. At first it showed just as a biochemical variation from the norm. In the long run, loss of the excretory, metabolic and endocrine elements of the kidney prompts the improvement of the clinical side effects and signs, which are alluded to as uremia[1].

METHODOLOGY

Our examination was directed on 140 patients, 84(60%) guys and 56(40%) females. All the patients analyzed as CRF, first time in admission, age 35-70 years with either sex were incorporated. Previously fit individual with diminished eGFR after history of acute volume misfortune and Intake of lipid decreasing medications in most recent one month were avoided. 140 patients determined to have CRF in inpatient division of Medicine, Nishtar Hospital Multan were incorporated into the examination. Fasting glucose and LDL-C were estimated. Information was entered and analysed by SPSS-18.

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RESULTS

Detail of results is given in tables 1, 2 and 3. Out of 140 examination cases, 112(80%) were Hypertensive and 28 (20%) were Non Hypertensive. Among the 84 male cases, 63 (75%) were Hypertensive and 21(25%) were Non Hypertensive. Among the 56 female cases, 49(87.5%) were Hypertensive and 7(12.5%) were Non Hypertensive. Mean LDL-C of our investigation cases was 115.95±22.53 mg/dl (least was 75 and most extreme was 150 mg/dl). Raised LDL-C was found in 98 (70%) and normal LDL-C was found in 42 (30%) cases. Among the 84 male cases, 49(58.3%) were having Elevated LDL-C and 35(41.7%) were having normal LDL-C. Among the 56 female cases, 49(87.5%) were having Elevated LDL-C and 7(12.5%) were having normal LDL-C. Among the examination cases, who were Hypertensive, Elevated LDL-C was found in 84(75%) cases and Normal LDL-C was found in 28(25%) cases. Among the examination cases, who were Non

Hypertensive, Elevated LDL-C was found in 14(50%) cases and Normal LDL-C was found in 14 (50%) cases.

Table 1: Hypertension among study cases (n=140)

Hypertension	Frequency	%age
Yes	112	80
No	28	20
Total	140	100

Table 2: Hypertension with regards to Elevated LDL-C (n=140)

Elevated LDL-C	Hypotension	
	Yes(n=112)	No (n=28)
Yes (n=98)	84	14
No (n=42)	28	14

P value=0.019

Table 3: Elevated LDL-C among study cases n=140)

Elevated LDL-C	Frequency	%age
Yes	98	70
No	42	30
Total	140	10

DISCUSSION

This investigation was directed on 140 patients, 84 (60%) guys and 56 (40%) females. Ages in this study were mostly 35 to 60 years i.e., 105 cases (75%). Among the 140 investigation cases, 112(80%) were Hypertensive and 28(20%) were Non Hypertensive. Rao et al[2] showed 85-95% predominance of hypertension in CKD, our examination comes about are near that. Among the 84 male cases, 63(75%) were Hypertensive and 21(25%) were Non Hypertensive. Also, among the 56 the female cases 49 (87.5%) were Hypertensive and 7 (12.5%) were Non Hypertensive.

Mean LDL-C of our investigation cases was 115.95 ± 22.53 mg/dl (least was 75 and greatest was 150 mg/dl). Raised LDL-C was found in 98 (70%) and normal LDL-C was found in 42 (30%) cases. Among the investigation cases, who were Hypertensive, Elevated LDL-C was found in 84 (75%) cases and Normal LDL-C was found in 28 (25%) cases. Egan et al[3] exhibited 61% predominance of Elevated LDL-C in CKD patients with hypertension. Among the examination cases, who were Non Hypertensive, Elevated LDL-C was found in 14 (50%) cases and Normal LDL-C was found in 14(50%) cases. Around one out of three grown-ups in the United States has hypertension.[4] The commonness of hypertension is higher among patients with CKD, continuously expanding with the seriousness of CKD. In light of a national review of agent test of noninstitutionalized grown-ups in the USA, it is evaluated that hypertension happens in 23.3% of people without CKD, and 35.8% of stage 1, 48.1% of stage 2, 59.9% of stage 3, and 84.1% of stage 4-5 CKD patients.[5] Prevalence of hypertension additionally fluctuates with the reason for CKD; solid relationship with hypertension was accounted for in patients with renal artery stenosis (93%), diabetic nephropathy (87%), and polycystic kidney illness (74%).[6] Evidence from a substantial number of clinical trials has unmistakably exhibited that viable treatment improves the unsafe impacts of uncontrolled hypertension.[7]

In an investigation by Badhu et al[8] to assess the serum level status of LDL-C in hypertensive retinopathy, including 30 haphazardly chose subjects with hypertensive retinopathy; age and sex coordinated 26 hypertensives without fundus changes. Serum LDL-C levels were evaluated in all subjects. Results indicated factually critical ($p<0.01$) higher serum levels of LDL-C in hypertensive patients with retinopathy. A raised serum level of LDL-C is related with hypertensive retinopathy.

CONCLUSIONS

Very high recurrence of Hypertension and Elevated LDL-C were seen in Chronic Renal Failure. Raised LDL-C was more incessant finding in CRF patients with Hypertension than in CRF tolerant without Hypertension, and this distinction was measurably huge.

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