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Knowledge, Attitude and Practices of Hyperlipidaemia patients in a Tertiary care setting

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ABSTRACT

In this study, we aimed to explore the knowledge, attitude and practice of patients with hyperlipidemia. A Prospective, Randomized study was carried out in the department of general medicine for a period of one year in Rajiv Gandhi Institute of Medical Sciences after taking the Ethical Clearance. The patient data was collected by using a well-designed questionnaire after taking their consent. The questionnaires were used to assess the patients' knowledge, attitude and practice towards hyperlipidemia and its management. A total of 850 patients were screened, out of which 516 patients were included in referral center group and 337 patients included in the paid clinic group. 80.4% of the total studied patients were considered to be adherence with their hypolipidemic therapies. Above half of the patients (57.0%) did not think they have hyperlipidemia, 22.4% did not know the reasons for taking hypolipidemic drugs and 28.1% did not realize the need for long-term treatment. Twenty-nine percent of the patients did not know that cardiovascular risk is associated with hyperlipidemia. This study concludes that knowledge, attitude and practice were low in hyperlipidemia patients. Patient's expectations should be taken as a major role in the management of their condition and to make beneficial lifestyle modifications.

Key words: Hyperlipidemia, Knowledge, Attitude, Practice, Tertiary care.

INTRODUCTION

Cardiovascular diseases are leading cause of death in both industrialized and developing countries (Bailey Merz CN *et al.*, 2002). CAD is usually due to atherosclerosis of large and medium sized arteries (Benner JS *et al.*, 2002). The primary risk factor which accelerates the formation of atherosclerosis is the elevated levels of cholesterol and triglyceride in the blood (Chattopadhyaya R *et al.*, 1996). High levels of low-density lipoprotein (LDL) accumulate in the extracellular sub endothelial space of arteries and are highly atherogenic and toxic to vascular cells (Chaturvedi V *et al.*, 2007). The cardiovascular disease risk from increased LDL cholesterol is supported by observations that cholesterol-lowering therapy greatly diminishes the clinical manifestations of atherosclerosis, particularly since the advent of inhibitors of 3-hydroxy-3-methylglutaryl coenzyme A reductase (i.e., statins) that profoundly lower LDL cholesterol (Cramer JA, 2002).

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Prevention is better than cure. One way to reduce CAD incidence is by incorporating changes in healthy lifestyle by educating, screening, detecting and treating modifiable risk factors. This may be recognized to their limited CAD knowledge and lack of concern for CAD ((NCEP, 2001). This study aims to explore patients' awareness about hyperlipidemia, misconceptions about the disease, its treatment. The information gained could consequently be helpful to design and initiate comprehensive programmes for detection and control of hyperlipidemia and its complications.

MATERIALS AND METHODS

The study was a prospective, randomized cross-sectional study conducted among hyperlipidemia outpatients attending to Department of General Medicine and Cardiology, Rajiv Gandhi Institute of Medical Sciences, a tertiary care center in south India from Nov 2008 to Dec 2010. Five hundred and sixteen consecutive patients with hyperlipidemia receiving hypolipidemic drug from past one year and willing to participate were included in the study. Patients having dementia or other unstable psychiatric illnesses were excluded. Institutional

ethical committee approval was obtained before starting data collection. Patient were randomized into referral center and paid clinic group based on their consultation with physician. Patients attending the referral center during free of service consultation were enrolled into referral center group and visiting during pay service are enrolled into paid clinic group.

The objectives of the study were explained to patients in both the groups, after taking consent; patients were interviewed. A Knowledge, Attitude, and Practice (KAP) Questionnaire was developed in two languages: Telugu and English and responses were recorded. The questionnaire consisted of four sections to collect different types of information including patient demographic data, disease history, treatment regimen, and patient's health knowledge and beliefs. Questions were developed according to the some notable proportions including perceived susceptibility, perceived risk, perceived benefits, and perceived barrier and cost. The reliability analysis was calculated and Cronbach's alpha was 0.73 after obtaining data from patients. A five-point scale was used for collection of responses and were categorized ranging from 1 (strongly agree) to 5 (strongly disagree) for patient's health knowledge and beliefs assessment. Data collected was analyzed using SPSS program.

RESULTS

This study includes 516 patients in the referral center group and 337 patients in the paid clinic group with hyperlipidemia and on hypolipidemic medications from past one year. Baseline characteristics (the mean age, duration of disease, male to female ratio and educational level) of the patients are shown in Table.1. Out of total 853 patients enrolled in the study, 490 patients were female patient. 363 were male patients. Maximum number of patients' was from 40 to 60 years of age followed by above 60 years, and 20 to 40 years respectively. Literacy rate was lower in females than in males. 169 illiterate patients were present in referral center group, 544 were educated and 51 patients were highly educated. Majority of hyperlipidemia patients (>40%) in the study were from retired group followed by house wives and least are (0.3%) students. 80.4% of the total studied patients were considered to be adherent with their hypolipidemic medications. Above half of the patients (57.0%) think they did not have hyperlipidemia, 22.4% did not know the reasons for taking hypolipidemic drugs and 28.1% did not realize the need for long-term treatment. Twenty-nine percent of the patients did not know that cardiovascular risk is associated with hyperlipidemia. Regarding hypolipidemic therapy, over one-third (33.5%) and one-fifth (20.3%) of patients disagreed the importance of drug therapy in disease management and its effectiveness in maintaining normal lipid levels.

There were significant differences in these concepts between patients in the paid clinic and referral centers groups. Referral center group is having more misconceptions, there was no difference in these health beliefs between the referral center and paid clinic group.

The only difference observed between the referral center and paid clinic groups was that a higher percentage of referral center group patients (31.0% vs 26.7%, $p=0.81$) conceived drug taking as a waste of money if they did not think they were suffering with hyperlipidemia shown in Table.2.

DISCUSSION

Patient's adherence to treatment can be improved by understanding patients' attitudes and beliefs about hyperlipidemia and hypolipidemic treatment plans (Foley KA *et al.*, 2005), which in turn will play a major role in receiving maximum benefits of treatment (Gotto AM Jr *et al.*, 1999; Ho P Micheal *et al.*, 2009; Lusic AJ, 2000). There are clear evidences that a linear relationship exist between patient adherence and clinical benefit (Marcelino J *et al.*, 1996). Patients' knowledge regarding the significance of cholesterol as a risk factor for coronary heart disease may affect adherence (Marcelino J *et al.*, 1996). Probably that the asymptomatic nature of the disease will leave patients wondering if their cholesterol level really requires daily attention to diet, exercise and medication (Parker RM *et al.*, 2000). Several studies suggest that patients who do not believe in the severity of the consequences of hyperlipidaemia regarding their health may also be less adherent with medication (Pearson T *et al.*, 1997; Rybacki JJ, 2002).

In the assessment of patients' knowledge on disease and treatment, it was found that significantly more non-adherent patients regarded drug as wastage of money if they did not think they were suffering with hyperlipidemia (39% vs 27%, $p=0.002$). This indicates that poor knowledge of patients on the nature of disease and therapy and inability to appreciate the benefits of maintaining adequate lipid levels in reducing long-term risks could have important impacts on adherence levels. Although their responses to direct questions on long-term nature of hypolipidemic therapy were similar between adherent and non-adherent groups, the knowledge problem became more obvious when they were asked to prioritize its value under money terms. Moreover, patients attending paid clinics were found to have better health knowledge than those attending publics.

This may be related to the high educational level of paid clinic patients although previous studies (Tanaka T *et al.*, 2007) showed a lack of relationship between the two. Another possible explanation comes from differences in healthcare settings. Provision of education on disease and treatment by physicians was likely to be less comprehensive given the time, resource, and structural constraints in the referral center s than in the fee-for-service paid clinics. It has also been suggested that physician-patient relationship may affect a patient's motivation to participate in treatment. This could in turn influence patient's willingness to learn about the disease and treatment. The communication and relationship between physicians and patients in referral center group was compromised by the limited hospital visit than paid clinic group (Wiegand P *et al.*, 2012). This relationship may be further weakened by the fact that patients did not see the same physician at each visit in the referral center.

Table.1 Socio-demographic data of hyperlipidemia patients

Sociodemographic variables	Total study population (n=853)	Referral center group (n=516)	Paid clinic group (n=337)	P-value
Age				
20-40	48(5.6%)	24(4.65%)	17(5.04%)	0.15
40-60	611(71.6%)	386(74.81%)	256(75.97%)	0.17
>60	194(22.7%)	106(20.55%)	64(18.99%)	0.15
Gender				
Male	363(42.5%)	225(43.6%)	138(40.9%)	0.44
Female	490(57.4%)	291(56.4%)	199(59.0%)	0.15
Education				
Nil	258(30.2%)	169(32.7%)	89(26.4%)	0.49
Intermediate	544(66.8%)	314(60.9%)	230(68.1%)	0.17
Graduation	51(5.97%)	33(6.4%)	18(5.3%)	0.53
Occupation				
Employed	217(25.43%)	94(18.2%)	123(36.5%)	<0.001
Unemployed	16(1.9%)	11(2.1%)	5(1.5%)	0.53
Retired	338(39.6%)	238(46.1%)	100(29.7%)	<0.001
House wife	258(30.2%)	156(30.2%)	102(30.3%)	0.99
Student	3(0.3%)	3(0.6%)	0(0%)	0.28

Table.2 Patient's knowledge, attitudes regarding hyperlipidemia and hypolipidemic treatments

	Total study population (n=853)	Referral center group (n=516)	Paid clinic group (n=337)	p-value*
Do not think they had hyperlipidemia	486(57.0%)	261(50.6%)	225(66.8%)	<0.001
Did not understand the reason for taking hypolipidemic drug	191(22.4%)	154(29.8%)	37(10.97)	<0.001
Did not realize the need of chronic medication	240(28.1%)	180(34.9%)	60(17.80)	<0.001
Did not realize hyperlipidemia is a risk for cardiovascular disease	248(29.1%)	200(38.8%)	48(14.24)	<0.001
Did not realize the effectiveness of the drug therapy in preventing other cardiovascular diseases	286(33.5%)	232(45.0%)	54(16.02)	<0.001
Did not realize the effectiveness of hypolipidemic drug therapy in controlling lipid levels	173(20.3%)	94(18.2%)	79(23.44)	0.06
Concluded drug taking as a waste of money since they are not dyslipidemic	250(29.3%)	160(31.0%)	90(26.70)	0.81

CONCLUSION

Our study focused mainly on the knowledge, attitude and practice of patients with hyperlipidaemia in a tertiary care setting. Patient's expectations should be taken as a major role in the management of their condition and to make beneficial lifestyle modifications.

More information about disease and its management will empower patients to manage their condition better. Further studies can be done to assess the efficiency of both patients and physicians education to improve the management of hyperlipidaemia.

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