International Journal of Healthcare Sciences ISSN 2348-5728 (Online)
Vol. 4, Issue 2, pp: (236-238), Month: October 2016 - March 2017, Available at: www.researchpublish.com

Prevalence of Dyslipideamia in Premenopausal Women: A Study in Pune, Maharashtra

Dr. Surbhi Seth, Dr. Vikas Madaan

Delhi, India

Abstract: **Background: Women health in premenopausal age is still a matter of neglect. Current scenario reveals that they are not spared of coronary artery disease in spite of the hormonal protection. Although several clinical trials of lipid lowering prevention of coronary artery disease have been conducted, women have always been involved in some number or have not had their result analyzed separately. Hence the present effort tries to find out the prevalence of dyslipidemia in premenopausal women. Objective: To study prevalence of dyslipidaemia in study group of female medical students of Padmashree Dr. D.Y. Patil Medical Hospital And Research Centre, Pimpri ,Pune. Secondly to find out the individual prevalence of abnormal levels of serum cholesterol, triglycerides, LDL and HDL .Materials and methods: The study group (n=200) comprised of female premenopausal medical students (Age: 20 to 40yrs) from a medical Centre was selected by random selection from 3rd year, final year undergraduates and students attending postgraduate courses. They were screened for lipid profile which includes Total cholesterol, Triglyceride, HDL cholesterol and LDL cholesterol by Enzymatic End Point method after 12-14 hrs fasting. The quantitative data was analyzed using MS Excel. Result: The prevalence of dyslipidemia was found out to be 10.5% with LDL contributing to the maximum (8.5%) followed by total cholesterol (1.5%), HDL (0.5%). Thus from this study it is presumed that premenopausal women are no longer protected by their hormonal status and age factor.**

Keywords: **dyslipideamia, women, lipid profile, premenopausal, prevalence.**

I. INTRODUCTION

It has only recently been realized that the higher gender specific coronary mortality due to dyslipidemia observed in women is due to increased death rates among premenopausal women [1-3]. The change in lifestyle and/or environment may be attributed to the susceptibility of this group to coronary artery disease. There has been recent interest focused on this group, however evaluation of dyslipidemia in premenopausal women has been overlooked despite its being leading killer of the women in this age group outpacing even breast cancer. [4]

Women health in premenopausal age is still a matter of neglect, though they form a vital part of society. Current scenario reveals that they are also not spared of coronary artery disease in spite of the hormonal protection. Cardiovascular disease is under recognized, under diagnosed and under treated by women patients and by some physicians, adding to the problem.[5]

Many of the risk factors have an impact in women which is substantially different from that in men. For example, diabetes removes the age differentials for heart diseases in women and also it is seen that women who smoke gets their first heart attack 19 years earlier than a nonsmoker, compare to 7 years earlier for a male smoker. [5]

Assessment and classification of serum cholesterol levels are the first steps in determining a patient's risk of CHD and need for therapeutic management. [6]

The Lipid Research Clinics' Follow-Up Study also demonstrated that both HDL-C and triglycerides were better predictors of coronary risk and cardiovascular mortality in women than total cholesterol or LDL-C. [7]

Diabetes is more common in women and is considered to essentially negate any protective effect of female sex against cardiovascular disease. [8]

Although several clinical trials of lipid lowering prevention of coronary artery disease have been conducted, women have always been involved in some number or have not had their result analyzed separately. Hence the present effort tries to find out the prevalence of dyslipidemia in premenopausal women.

II. OBJECTIVE

To estimate the lipid profile in premenopausal women and to find out prevalence of dyslipidaemia in study group of medical students of Padmashree Dr. D.Y. Patil Medical Hospital And Research Centre , Pimpri , Pune. Secondly, to find out the individual prevalence of abnormal levels of serum cholesterol, HDL, LDL and triglycerides

III. MATERIAL AND METHODS

Study population consisting of 200 women from age 20-40 years from undergraduate, postgraduate courses as well as faculty at medical college were selected by random sampling during two months. After consent taken from participant, blood samples were collected by venipuncture after an overnight fasting for 12-14 hours. Venous blood was collected in plain bulbs for measurement of lipid profile by 'Enzymatic End Point Method'. The procedures followed were in accordance with the ethical standards.

Dyslipideamia is defined by presence of one or more than abnormal serum lipid concentrations. Cut off values were defined from NCEP-ATP III guidelines as TC >200mg/dl, LDL-C as >100mg/dl, hypertriglyceridemia as TG >150mg/dl and HDL-C <40mg/dl.

Statistical analysis was performed using MS Excel. Prevalence of dylipidemia by means of its determinants was calculated using prevalence rate formula; number of patients per total number of subjects at time of study multiplied by 100. Results were expressed in percentages.

IV. RESULTS

On applying NCEP guidelines, it was found that 10.5% of the study population had at least one abnormal parameter i.e had dyslipidemia. Raised LDL levels were found in 8.5% of study population followed by total cholesterol (1.5%) and lowered HDL in 0.5% of total study population.

V. DISCUSSION AND CONCLUSION

It is a well established fact that premenopausal women are no longer immune to ischemic hart diseases. In view of this, present study was carried out to evaluate prevalence of one of the common predisposing factors for cardiovascular disease named as lipid profile. The study was revealed that the prevalence of dyslipidemia in the study group of premenopausal women is 10.5% with major contribution of raised LDL.

Diets high in saturated fat, trans fat, and cholesterol appear to cause a reduction in LDL receptors in the liver, thus retarding LDL catabolism leading to raised LDL.[9]

Although the role of HDL has long been known, for the last 40-odd years attention has been focused on the "bad" cholesterol - low-density lipoprotein cholesterol, or LDL. The availability of the 'statin' drugs has allowed significant reductions in LDL to be achieved (sometimes accompanied by smaller increases in HDL). Each 40 mg/dL decrease in LDL has been shown to be linked with 24% fewer major cardiovascular events. [10] Because there is overwhelming evidence[1]that an elevated LDL concentration in plasma is atherogenic, whereas a high HDL level is cardio protective [11] measurement and interpretation of LDL and HDL levels is emphasized.

According to NCEP 2001 women should have their serum cholesterol done at age 20 years and then once every five years or more often if you have a family history of high cholesterol or other risk factors. If your serum cholesterol results are in the moderate or high-risk range, a lipid profile will be needed for appropriate management. [12]

Cardiovascular disease has now become serious epidemic in the female population. Thus, it is imperative for clinicians to increase their awareness of sex-based differences in risk factors, lipid profiles, and treatment response to effectively refocus cardiovascular care in premenopausal population. Cardiovascular risk factors should be assessed in women starting much earlier than menopause and should be treated as aggressively in women as in men.

REFERENCES

[1] Khan SS, Nessim S, Gray R, Czer LS, Chaux A, Matloff J. Increased mortality of women in coronary artery bypass surgery: evidence for referral bias. *Ann Intern Med*.1990;112:561–567.

[2] Tofler GH, Stone PH, Muller JE, et al. Effects of gender and race on prognosis after myocardial infarction: adverse prognosis for women, particularly black women. *J Am Coll Cardiol*. 1987;9:473–482.

[3] Greenland P, Reicher-Reiss H, Goldbourt U, Behar S. In-hospital and 1-year mortality in 1524 women after myocardial infarction: comparison with 4315 men. *Circulation*. 1991;83:484–91.

[4] Vaccarino V, Parsons L, Every NR, Barron HV, Krumholz HM. National Registry of Myocardial Infarction. Sex based differences in early mortality after myocardial infarction. *N Engl J Med*. 1999;341:217–25

[5] Women's Heart Institute © 1996- 2002

[6] Am J Health-Syst Pharm 59(17):1615-1631, 2002. © 2002 American Society of Health-System Pharmacists

[7] Bass KM, Newschaffer CJMJ, Bush TL. Plasma lipoprotein levels as predictors of cardiovascular death in women. *Arch Intern Med*. 1992; 153: 209–16.

[8] Manson JE, Colditz GA, Stampfer MJ, et al. A prospective study of maturity onset diabetes mellitus and risk of coronary heart disease and stroke in women. *Arch Intern Med*. 1991; 151: 1141–7.

[9] Ballantyne CM. Achieving greater reductions in cardiovascular risk: lessons from statin therapy on risk measures and risk reduction. *Am Heart J*.2004; 148:3S-8.

[10] P. Barter, AM. Gotto, JC. LaRosa et al. HDL cholesterol, very low levels of LDL cholesterol, and cardiovascular events. *N Engl J Med*.2007;357: 1301—10

[11] Miller GJ, Miller NE. Plasma high density lipoprotein concentration and development of ischemic heart disease. *Lancet*.1997;1:16-19

[12] Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults. Executive Summary of The Third Report of The National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, And Treatment of High Blood Cholesterol In Adults (Adult Treatment Panel III).JAMA. 2001 May 16; 285(19):2486-97.