RESEARCH ARTICLE

LIFESTYLE PATTERN OF HYPERLIPIDEMICS IN HYDERABAD CITY

Prasanthi. P[1]* and Amirthaveni. M[2]

[1,2] Department of Food Science and Nutrition, Avinashilingam Institute for Home Science
and Higher Education for Women Coimbatore - 641043

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ABSTRACT

Hyperlipidemia is one of the major factors affecting most of the younger population in developing countries. The main cause of this is due to the lifestyle habits of the individuals and is one of the major risk factor in coronary artery disease and other cardiovascular disease and is becoming the major leading cause of mortality. The study is taken up to know the lifestyle habits in one thousand hyperlipidemic subjects of both sexes and were in the age group of 40-60 years. The lifestyle pattern such as exercise, smoking and alcohol consumption was collected using questionnaire. Seventy per cent of the male hyperlipidemics were having alcohol consumption for the five to ten years and eight per cent were having more than ten years. We also observed that eighty per cent and seventy per cent of the male and female hyperlipidemics were consuming caffeine either daily or occasionally respectively. Smoking pattern was observed among fifty five per cent of the male hyperlipidemics who were consuming either regularly of 3-5no. or occasionally. None of the female hyperlipidemics have the habit of alcohol consumption or smoking. Almost ninety five per cent of the hyperlipidemic subjects were involved in any one of the regular exercises. So there is urge to modify the lifesyle changes for the betterment towards healthy life and thereby lowering the risks of lifestyle diseases.

INTRODUCTION

Hyperlipidemia is an elevation in atherogenic lipoprotein particles including cholesterol, cholesterol esters and triglycerides and also includes low HDL cholesterol level. The cause of hyperlipidemia is lifestyle habits and heredity along with diabetes, kidney disease and an underactive thyroid gland. It is one of the major risk factors in coronary artery disease and other cardiovascular disease and is becoming the major leading cause of mortality. According to National Commission on Macroeconomics and Health, 62 million individuals would have coronary artery disease by 2015, of these 23 million would be younger than 40 years (Satyanarayana and Ramanarayana, 2011). Globally, cardiovascular diseases are increasing substantially and reaching almost 23.6 million by 2030 (WHO, 2012). Cardiovascular disease in India has quadrupled in the last 40 years and WHO estimates that by 2020 close to 60 percent of cardiac patients worldwide will be Indian. The established risk factors of cardiovascular disease include lack of exercise, poor diet and smoking. To date cardiovascular disease remains one of the leading causes of morbidity and mortality worldwide and the majority of deaths occur in low and middle-income countries such as India and China [WHO, 2011]. Although genetic factors and age are important in determining the risk, the result is an increasing number of cases with intermediate risk factors and comorbidities - hypertension, hypercholesterolemia, dyslipidaemia, insulin resistance, diabetes, obesity and lifestyle factors such as smoking and diet are also major risk factors associated with the disease [Louis *et al.,* 2007]. The importance of a healthy lifestyle in the prevention of disease is widely understood and most people know that lifestyle changes and choices can be critical in determining their health and lifespan. Keeping this in view the study was carried out with the following objectives

- Lifestyle pattern such as alcohol consumption, smoking pattern and exercise pattern of the selected male hyperlipidemics.
- Duration of the lifestyle habits before and after the onset of the disease.

Methodology

The lifestyle change has been the subject of innumerable epidemiological and clinical investigations. The study was carried out with one thousand hyperlipidemic subjects of both sexes. They were in the age group of 40-60 years and were taken into the study after getting the willingness from the concerned hyperlipidemic subjects. Information on lifestyle pattern such as alcohol consumption, smoking pattern and exercise were also collected by using a questionnaire. The lifestyle patterns of the selected hyperlipidemics are discussed in the results and discussion.

RESULTS AND DISCUSSION

The lifestyle pattern of the selected is mainly affected by the epidemiological transition with increased globalization. As most of the population was busy in their day today activities they are much prone to easy accessible foods like ready to eat and fast foods etc, which is mainly affecting the lifestyle of a particular

* Corresponding author: *Prasanthi. P*
Department of Food Science and Nutrition, Avinashilingam University, Coimbatore – 43,

individual. The lifestyles followed by the individuals are discussed below. Among the one thousand selected hyperlipidemics of both sexes, 441 were male and 559 were female subjects.

cent were found to be consuming twice a week and only 6.6 per cent were found to be consuming once a week of 200 ml. Though the subjects had onset of the disease and had high levels of cholesterol they could not give up the habit of drinking.

Table I Alcohol Consumption Pattern by The Male Subjects

Frequency	Quantity consumed					
	100ml		150ml		200ml	
	Number	Per cent	Number	Per cent	Number	Per cent
Daily	40	9.0	-	-	-	-
Twice a week	54	12.2	-	-	67	15.2
Once a week	-	-	-	-	29	6.6
Occasionally	77	17.5	36	8.2	-	-
Total	171	38.7	36	8.2	96	21.8
Never	138 (31.3 per cent)					

Table II Caffeine Consumption by The Hyperlipidemic Subjects

Frequency consumed	Quantity consumed							
	Male				Female			
	100ml		150ml		100ml		150ml	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
				Daily				
1-3 servings	95	21.5	153	34.7	224	40.1	67	12.0
3-5 servings	41	9.3	-	-	27	4.8	-	-
Occasionally	49	11.1	28	6.3	29	8.8	26	8.2
Total	185	42.0	181	41.0	273	53.7	113	20.2
Never	75 (17 per cent)				146 (26.1 per cent)			

Table III Smoking Pattern

Type consumed	Number smoked / day							
	1-2		3-5		>5		Occasionally	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Cigarette	-	-	135	30.6	51	11.6	36	8.1
Piper	-	-	17	3.9	-	-	-	-
Total	-	-	152	34.5	51	11.6	36	8.1
Never	202 (45.8 per cent)							

Table IV Exercise Pattern of The Subjects

Activity	Duration					
	30min		45min		60min	
	Number	Per cent	Number	Per cent	Number	Per cent
No Exercise	42 (4.2 per cent)					
			Mild			
Normal walking	239	23.9	121	12.1	-	-
Household work	11	1.1	16	1.6	204	20.4
Gardening	12	1.2	19	1.9	-	-
			Moderate			
Brisk walking	101	10.1	7	0.7	-	-
Jogging	15	1.5	9	0.9	-	-
Cycling	4	0.4	0	0	-	-
Yoga	100	10	100	10	-	-

Alcohol consumption

The alcohol consumption pattern of the male hyperlipidemic subjects is depicted in Table I. From the data consolidated and presented in Table 1, it is seen that among the 441 selected male hyperlipidemic subjects, 138 hyperlipidemic individuals was not using any type of alcoholic beverages and the remaining 303 hyperlipidemic were consuming it. With regard to the duration of the alcohol consumption, 72 per cent were consuming for the past 5 to 10 years, 20 per cent were consuming for the past 5 years and only 8 per cent were consuming for more than 10 years. From this it is concluded that 'bad habits die hard'. With respect to the frequency of consumption, 17.5 per cent were found to be taking occasionally, 12.2 per cent were found to be taking twice a week and only 9 per cent were taking on daily basis of 100 ml. Thirty six hyperlipidemic subjects were found to be consuming 150 ml occasionally. Among the 96 hyperlipidemic individuals 15.2 per

A very few subjects of 40 stopped the habit drinking after the onset of the disorder of hyperlipidemia.

Caffeine consumption

Caffeine consumption by the male subjects is tabulated in the Table II. Among the 441 male hyperlipidemic subjects, 21.5 per cent were found to be consuming 1-3 servings, 9.3 per cent were found to be consuming 3-5 servings of coffee daily and 11.1 per cent were found to be consuming occasionally of 100 ml. majority of 34.7 per cent were found to be consuming 1-3 servings daily and only 6.3 per cent were consuming occasionally of 150 ml of coffee and almost 17 per cent were not consuming coffee. From the Table II, 40.1 per cent of the female hyperlipidemics were found to be consuming 1-3 servings, 4.8 per cent were found to be consuming 3-5 servings of 100 ml of coffee daily and around nine per cent were consuming occasionally. Among the subjects who are consuming 150 ml of coffee, 12 per cent were found to be

consuming 1-3 servings daily and eight per cent were consuming occasionally.

Smoking pattern

Smoking pattern of the male subjects is presented in Table III. From Table III, it was evident that among 441 male hyperlipidemics, 239 hyperlipidemics were found to be having the habit of smoking either of the items like cigarette, beedi and piper and 202 hyperlipidemics do not smoke. Among the smoking types, cigarette smoking was found to be more common among the selected male hyperlipidemic subjects. Most (30.6 per cent) of the hyperlipidemic individuals smoked cigarette of 3-5 numbers per day, 11.6 per cent were smoked more than 5 times per day, 8.1 per cent were smoking occasionally and only 3.9 per cent were found to be smoking piper. None of the subjects were smoking beedi. Though they are not used to regular smoking they intend to smoke to maintain relationship and social status.

Exercise pattern

Table IV gives the exercise pattern of the hyperlipidemic subjects. Exercise plays an important role in an every individual's life. It also plays a major role in many of the degenerative diseases like cardiovascular disease, diabetes, obesity and hypertension. It also helps to reduce high blood pressure, increased blood cholesterol levels as well as increased blood glucose levels (Dietary Guidelines, ICMR, 2010). Mild exercise involves normal walking (avoid vehicles for short distances, leisure walking), houseld work (manual housekeeping activities like dusting, washing, cleaning, arranging things) and gardening (watering plants). Moderate exercise involves brisk walking (about 3½ miles per hour) which includes climbing, gardening/yard work, dancing, walking short distances for fetching milk and vegetables, jogging (2 ½ miles per hour), bicycling (less than 10 miles per hour) and yoga includes yogasanas and pranayama (Dietary Guidelines, ICMR, 2010). From Table IV, it was seen that among the one thousand hyperlipidemics, 23.9 per cent were found to be walking regularly, 1.1 per cent were engaged in household work and 1.2 per cent were engaged in gardening for 30 min of mild activity. Some hyperlipidemic individuals were doing regularly for 45 min. of which 12.1 per cent were engaged in walking, 1.6 per cent were engaged in household work and 1.9 per cent were engaged in gardening. Most of the hyperlipidemic subjects were engaged in household work regularly for 60 min. In moderate activity, 10.1 per cent were engaged in brisk walking, 1.5 per cent were engaged in jogging, 0.4 per cent was engaged in cycling and 10 per cent were engaged in yoga for 30 min regularly. Among the hyperlipidemic individuals selected, 0.7 per cent were engaged in brisk walking, 0.9 per cent were engaged in jogging, 10 per cent were engaged in yoga for 45 min daily. Of the one thousand hyperlipidemics, 4.2 per cent were not engaged in any type of exercise pattern due to old age and other health problems mainly arthritis and breathlessness. In one of the seven cohort studies from a large European initiative concluded that people with job stress and unhealthy lifestyle are at higher risk of coronary artery disease than people who have job stress but lead a healthy lifestyle (ScienceDaily, 2013).

According to the survey conducted by Teo *et al.,* (2013) concluded that among a sample of patients with a coronary heart disease or stroke event from European countries with varying income levels, the prevalence of healthy lifestyle behaviours was low, with even lower levels in poorer countries. Liu *et al.,* (2012) opined that maintaining a healthy lifestyle from young adulthood into 40s is strongly associated with low cardiovascular disease risk in middle age according to new Northwestern Medicine Study.

CONCLUSION

Alcohol consumption and smoking pattern plays an important role in the development of risk of cardiovascular diseases where as the exercise helps in preventing the risk of cardiovascualr disease. Avoiding alcohol and smoking reduces the risk of cardiovascular disease by almost fifty percent as concluded by many studies. Exercise helps and plays an important role as that of diet and medicine. People with hyperlipidemia who exercise regularly requires less medicine, as it lowers the blood pressure and serum cholesterol. So the lifestyle changes inturn helps in many ways to live and lead a healthy life.

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