Asian Journal of Chemistry Vol. 21, No. 9 (2009), 7200-7204

Effect of Life Style and Eating Habits on Blood Lipid Levels

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The represented study has been commenced on 1006 adult people consists of 598 women and 408 men between age of 25-55 from Cumra Government Hospital, Turkey about the effect of life style and eating habit on their blood lipid levels. Blood samples taken after 12 h fasting patients were kept into tubes. After coagulation, triglyceride, total cholesterol, low density lipoprotein cholesterol and high density lipoprotein cholesterol analysis were completed by separation serums. The average triglyceride levels of 1006 adult people is found to be 167.80 ± 98.43 mg/dl, triglyceride levels of men is 174.37 ± 102.69 mg/dl and for women is 163.31 ± 95 mg/dl. While overall average total cholesterol is 196.66 ± 44.93 mg/dl, in men is 191.76 ± 43.55 mg/dl and it is found in women as 200.00 ± 45.59 mg/dl. Average high density lipoprotein cholesterol in general is 50.67 ± 12.30mg/dl, in men is 48.11 ± 12.59 mg/dl and in women is 52.41 ± 11.80 mg/dl. The mean low density lipoprotein is 115.49 ± 38.52 mg/dl, in men is 112.23 ± 36.19 mg/dl and in women is 117.71 ± 39.90 mg/dl. This study results in life styles groups; L0: 101 adult polyclinic patients, L1: 195 adult polyclinic patients, L2: 354 adult polyclinic patients, L3: 356 adult polyclinic patients. In this study results in eating habits groups; E0: 210 adult polyclinic patients, E1: 187 adult polyclinic patients, E2: 214 adult polyclinic patients, E3: 395 adult polyclinic patients. In this study with eating habits connection life style are significant ($p < 0.05$). Triglyceride and high density lipoprotein values that the high are determined and this situation are interpreted that life styles c on lipid profile of the positive effect ($p < 0.05$).

Key Words: Life style, Eating habits, Blood lipid levels.

INTRODUCTION

The prevalence of human obesity and related chronic disorders such as diabetes, cardiovascular diseases, and cancer is rapidly increasing. Human studies have shown a direct relationship between obesity and infertility[1]. The prevention and treatment of childhood overweight and obesity has become a major public health challenge. Worldwide the prevalence of overweight and obesity in children has increased rapidly during the past two decades[2,3]. Responsible for this trend are various changes in the social, economic and physical environment, which are elements of the nutrition transition[4,5] and are characterized by a more sedentary lifestyle, a decrease in physical

activity and an increase in the consumption of foods high in fat and refined carbohydrates as well as sweetened drinks and foods that are low in fiber. In present report, the effect of eating habits and life styles of 1006 adults on the blood lipid levels are reported.

EXPERIMENTAL

The represented study has been done on 1006 adult polyclinic patients consists of 598 women patients 408 men patients between the age of age of 25-55 from the Cumra Goverment Hospital, Turkey.

The experimental patients should follow the criteria: (1) Fasting blood glucose (FBG), C reactive protein (CRP), alkaline phosphatase (ALP), serum glutamic oxaloacetic transaminase or aspartate aminotransferase (SGOT/ASAT), serum glutamic pyruvic transaminase or alanine transaminase (SGPT/ALT), thyroid stimulating hormone (TSH), free thyroid 3 (FT3), free thyroid 4 (FT4), blood urea and blood creatine levels within normal limits. (2) Being out of dialysis application. (3) Not being in the treament of malinty. (4) During the last three monts, not undergone by serious surgical treatment. (5) Being between the ages of 25-55 while collecting their blood samples *i.e.*, being an adult patients.

Methods: Polyclinic application up with, the criteria given above those who obey physical measurements, made of information was taken and blood samples of the 12 h following the fasting in the morning (08:00-09:30 AM) are taken in vacuum vials.

From collected samples, all sera were centrifuged after clotting and triglyceride, total cholesterol, high density lipoprotein, low density lipoprotein analysis tests were performed simultaneously. These tests were performed using Thermo Electron high density lipoprotein: 981657 kits on Conelab 60 i Automated Test Device.

Life style groups: Life style was determined in 4 groups. **L0 group:** Life style with no exercise or no regular walking. **L1 group:** Very little exercise that under 1 km at least walk or low physical active. **L2 group:** Moderate activity exercise is the day 1 km the regular walking or medium physical active. **L3 group:** Regular walking more than 1 km exercise or highly physical active.

Eating habits: Eating habits was based on 4 groups.

In this study, adult patients were classified in to 4 groups as fallows: **E0 group:** the ones not eating saturated lipid, **E1 group:** the ones with unsaturated lipid rated according to its value were put in to, **E2 group:** the ones with pure saturated were evaluated as and **E3 group:** the ones mix type eating (saturated, unsaturated food) were evaluated.

Statistical assesments: Measured parameters the groups for statistical according to the normal assessments showing the distribution measurements two groups in the middle compared Z-test and regular distribution designation more than one of independent group comparison kruskal-wallis H test statistical data analysis program SPSS 15.0 held by using.

RESULTS AND DISCUSSION

Triglyceride: From the obtained data when 1006 adult patients average triglyceride levels are found as 167.80 ± 98.43 mg/dl.

Cholesterol: The study concludes the average total cholesterol levels are found to be 196.66 ± 44.93mg/dl.

High density lipoprotein cholesterol: Average high density lipoprotein cholesterol levels in blood serum is 50.67 ± 12.30 mg/dl.

Low density lipoprotein cholesterol: Average low density lipoprotein cholesterol levels in blood serum as 115.49 ± 38.52mg/dl.

This study results in life styles groups; L0: 101 adult polyclinic patients, L1: 195 adult polyclinic patients, L2: 354 adult polyclinic patients, L3: 356 adult polyclinic patients. In this study results in eating habits groups; E0: 210 adult polyclinic patients, E1: 187 adult polyclinic patients, E2: 214 adult polyclinic patients, E3: 395 adult polyclinic patients.

In this study with eating habits connection life style are significant (Table-5, $p < 0.05$). triglyceride and high density lipoprotein values that the high are determined and this situation are interpreted that life styles c on lipid profile of the positive effect (Tables 1 and 3, $p < 0.05$).

Another important result is that with eating habits connection blood lipid levels especially cholesterol, high density lipoprotein cholesterol, low density lipoprotein cholesterol are determined (Tables 2-4, $p < 0.05$).

In present studies the blood levels lipids *i.e.*, triglycerides, cholesterol, high density lipoprotein cholesterol, low density lipoprotein cholesterol, interrogating factors such as life style and eating habits, its connection with the measured parameters are evaluated.

Life styles was obtained the effectiveness on triglycerides, high density lipoprotein cholesterol, levels in blood (Table-1 and 3, $p < 0.05$). On the other hand was not determined that releated low density lipoprotein cholesterol levels in blood (Table-4, $p > 0.05$).

TABLE-1
LIFE STYLE AND EATING HABITS EFFECT ON BLOOD TRIGLYCERIDE LEVELS

		Triglyceride (mg/dl)			
		N	Mean	Standard deviation	
Life style	L0	101	169.65	106.05	Ki-kare = 7.921, p = 0.048*
	L1	195	150.09	84.22	
	L2	354	168.54	95.40	
	L3	356	176.23	105.31	
Eating habits	E0	210	160.18	82.98	Ki-kare = 4.557, p = 0.207
	E1	187	183.49	112.21	
	E2	214	165.49	90.10	
	E3	395	165.68	102.83	
Total		1006	167.80	98.43	

*As a statistical difference 0.05 meaning it is important level.

TABLE-2
LIFE STYLE AND EATING HABITS EFFECT ON BLOOD CHOLESTEROL LEVELS

		Cholesterol (mg/dl)			
		N	Mean	Standard deviation	
Life style	L0	101	195.14	50.21	Ki-kare = 0.960, p = 0.811
	L1	195	194.98	41.78	
	L2	354	197.06	43.92	
	L3	356	197.60	46.16	
Eating habits	E0	210	186.49	39.60	Ki-kare=16.563, p = 0.001*
	E1	187	196.79	48.86	
	E2	214	201.49	44.84	
	E3	395	199.38	45.05	
Total		1006	196.66	44.93	

*As a statistical difference 0.05 meaning it is important level.

TABLE-3
LIFE STYLE AND EATING HABITS EFFECT ON BLOOD HIGH DENSITY LIPOPROTEIN CHOLESTEROL LEVELS

		High density lipoprotein (mg/dl)			
		N	Mean	Standard deviation	
Life style	L0	101	47.42	11.97	Ki-kare = 19.804, p < 0.001*
	L1	195	52.55	11.39	
	L2	354	49.39	12.28	
	L3	356	51.83	12.63	
Eating habits	E0	210	48.06	13.68	Ki-kare = 51.034, p < 0.001*
	E1	187	47.39	12.00	
	E2	214	52.59	11.65	
	E3	395	52.57	11.45	
Total		1006	50.67	12.30	

*As a statistical difference 0.05 meaning it is important level.

TABLE-4
LIFE STYLE AND EATING HABITS EFFECT ON BLOOD LOW DENSITY LIPOPROTEIN CHOLESTEROL LEVELS

		Low density lipoprotein (mg/dl)			
		N	Mean	Standard deviation	
Life style	L0	101	114.73	40.86	Ki-kare = 0.607, p = 0.895
	L1	195	115.18	36.73	
	L2	354	116.38	38.29	
	L3	356	114.98	39.15	
Eating habits	E0	210	110.34	36.02	Ki-kare = 7.946, p = 0.047*
	E1	187	116.07	42.31	
	E2	214	119.05	38.08	
	E3	395	116.01	38.02	
Total		1006	115.49	38.52	

*As a statistical difference 0.05 meaning it is important level.

Eating habits was obtained the effectiveness on cholesterol, high density lipoprotein cholesterol, low density lipoprotein cholesterol in blood lipit levels (Tables 2-4, $p < 0.05$). On the other hand was not determined triglyceride level in blood (Table-1, $p > 0.05$).

TABLE-5
LIFE STYLES AND EATING HABITS

			Eating habits				Total
			E0	E1	E2	E3	
Life styles	L0	Count	15	17	19	50	101
		% within yasam	14.9	16.8	18.8	49.5	100.0
		% within beslenme	7.1	9.1	8.9	12.7	10.0
	L1	Count	39	30	40	86	195
		% within yasam	20.0	15.4	20.5	44.1	100.0
		% within beslenme	18.6	16.0	18.7	21.8	19.4
	L2	Count	77	76	45	156	354
		% within yasam	21.8	21.5	12.7	44.1	100.0
		% within beslenme	36.7	40.6	21.0	39.5	35.2
	L3	Count	79	64	110	103	356
		% within yasam	22.2	18.0	30.9	28.9	100.0
		% within beslenme	37.6	34.2	51.4	26.1	35.4
Total		Count	210	187	214	395	1006
		% within yasam	20.9	18.6	21.3	39.3	100.0
		% within beslenme	100.0	100.0	100.0	100.0	100.0

Chi-Square = 48.811, $p < 0.001$.

At first, we evaluated the issue in present studies is that, eating habits, life styles and the blood lipid levels of the with the relationship. A positive association was observed between prevalence of hypercholesterolemia and saturated eating habits. It is known that age is a factor that correlates well with blood lipid levels[6-8].

Another important result is that with eating habits connection blood lipid levels especially cholesterol, high density lipoprotein cholesterol, low density lipoprotein cholesterol are determined (Tables 2-4, $p < 0.05$).

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(*Received*: 19 January 2009; *Accepted*: 17 August 2009) AJC-7751