THE EATING HABITS AND CURRENT LIFE STYLE AS RISK FACTORS REGARDING THE INCREASE IN THE BLOOD'S LIPID LEVELS

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RESUME

Etant donné le rôle important a joué par le cholestérol et ses fractions dans les désordres comme : artériosclérose, maladies cardio-vasculaires et embolismes cérébraux, nous avons effectué une étude se concentrant sur des patients de l'Ambulatory de l'hôpital clinique du comté de secours de Galati (connu pour leurs plus grands niveaux serous de ces valeurs), comme sur le chemin ils sont influencés par le régime et le traitement de drogue.

MOTS CLES: *Cholestérol, HDL-Cholestérol, LDL-Cholestérol, lipides totaux, TG.*

1. Introduction

The eating habits and the life style act as risk factors on the increase of the blood's lipid levels, eventually leading to severe disorders, induced by the distress of this metabolism [1].

The increased values of the total lipid levels and especially of the cholesterol can generally be correlated with disorders such as: HTA, AVC, coronary illnesses and arteriosclerosis [2,6].

The Cholesterol is comprised of various fractions, mainly represented by the HDL-Cholesterol and LDL-Cholesterol. The HDL-Cholesterol is also known as the "*good cholesterol*" and is transported by the high density lipoproteins. This cholesterol type stand for around 35% of the entire cholesterol amount, having the role of destroying the fat deposits on the walls of the blood vessels; should there be a sufficient level of HDL-Cholesterol, the risk of developing a cardiovascular disease are greatly reduced. The LDL lipoproteins, also known as the low density lipoproteins, transport the "*bad cholesterol*" which, if exceeding a certain level in the blood, leads to the formation of fat deposits, thus narrowing the arteries' lumen, eventually inducing the arteriosclerosis and increasing the risk of developing cardiovascular diseases, AVC etc [3].

The HDL-Cholesterol's food sources are common knowledge: fish, olive oil, dried fruits (avocado, nuts, peanuts) and also the LDL-Cholesterol's sources: eggs, meat, cheese, meat products and fat milk [4-6].

2.Materials and Methods

The study has been carried out on a lot of 108 patients, all diagnosed with dyslipidemias and treated in the Galati Clinical Emergency County Hospital's Ambulatory, having been randomly selected between 2003 and 2006.

The laboratory tests ran on these patients displayed increased (and highly increased) lipid levels in the blood. The tests have used specific and sensible enzymatic methods as to determine the serous levels of the overall Cholesterol, the HDL-Cholesterol, the LDL-Cholesterol, the total lipids before and after having started the drug treatment and diet. The surveillance of the treatment's effectiveness consisted of monitoring the same serous parameters every three months.

3. Results and discussions

Following the data presented by the study, it has been noticed that, in general, the patients are over 40 year old, an increased incidence being discovered in patients over 60-70 years old (46%). (figure 1)
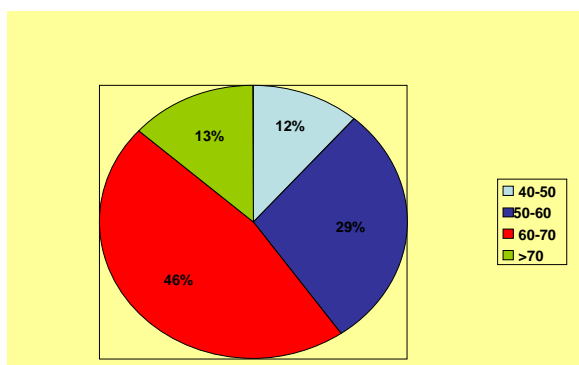

Figure 1. *The age distribution of the patients*

As it can be noticed, the female patients presenting increased levels of lipids in their blood are more than half of all the patients, the situation being explained by the hormonal predisposition. (figure 2)
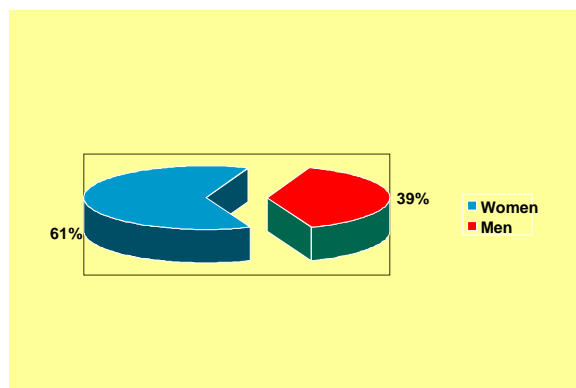
Figure 2. *The gender distribution of the patients*

The Cholesterol (VN=160-200 mg/dl). Several growth levels have been discovered among the significant variations of the patients' cholesterol levels. Comparing the test lot to the cholesterol's growth rates, it has been concluded that most of the patients belong to the first interval, constantly decreasing towards the last interval with the lowest registered values. (table 1, image 3)
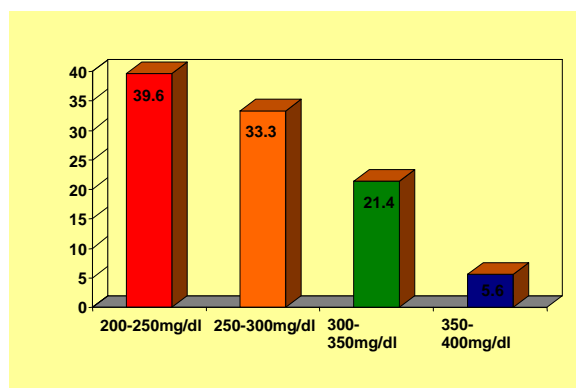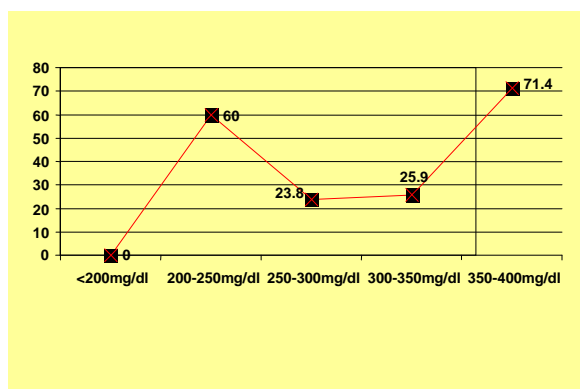

Image 3. *The percentage of patients compared to the cholesterol growth intervals at the beginning of the study*

Table 1. *The number of patients compared to the cholesterol growth intervals at the beginning of the study*

Cholesterol levels	Patients number
200-250mg/dl	50
250-300mg/dl	42
300-350mg/dl	27
350-400mg/dl	7

After the treatment, the percentage of the patients having successfully reached normal cholesterol levels during the initial increase periods is recorded on a graphic, with increased values in the following extreme intervals: 350-400 mg/dl (71,4%) și 200-250 mg/dl (60%).(figure 4)

Figure 4. *The percentage of the patients having reached normal post-treatment cholesterol levels, compared to the initial cholesterol growth intervals*

For the 250-300 mg/dl and 350-400 mg/dl cholesterol, the percentage of the patients having reached normal values is much more reduced: 23.8% respectively 25.9%.

The reduced percentage of the patients maintaining their reduced cholesterol leves after the treatment has the following causes:

-Abandoning the treatment, regarding the HTA association, not realizing that the high cholesterol level maintains increased TA levels and only continuing the anti-hypertensive treatment;

-Reaching normal levels after a determined treatment period, without subsequent determinations of the cholesterol level;

-The indifference, regarding those not presenting clinical manifestations;

-Financial reasons.

The increased cholesterol levels must be investigated in order to determine which of the fraction is to be held responsible.

The HDL-cholesterol, together with the LDL-cholesterol, contributes to maintaining an optimal level of the blood's cholesterol.

The significant variations of the LDL induce the risk of certain disorders in the functions of the human body.

Table 2. *The HDL levels – risk intervals*

HDL	Reduced risk	Medium risk	Increased risk
Men	>55mg/dl	35-55mg/dl	<35mg/dl
Women	>65mg/dl	45-65mg/dl	<45mg/dl

Should increased HDL (the good cholesterol fraction) levels be discovered, the risk of further developing cardiovascular disorders is reduces, nonetheless it grows proportionally with the intervals mentioned in the 2nd table.

By analyzing the serous values of the HDL-Cholesterol on the risk intervals and gender groups, it can be concluded that regarding our lot, 59% of the patients are part of the medium risk group, more than half of them being female patients (34%). The greatest risk percentage is again found in the female patients, being double the value encountered in the male patients (13.6% compared to 6.8%), an opposite situation compared to the low risk (men 11.3%, compared to the women, 9%). (figure 5)
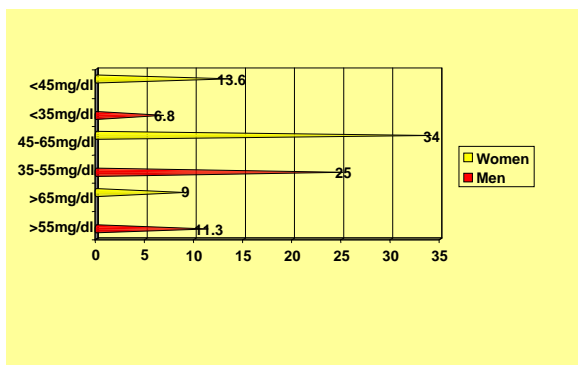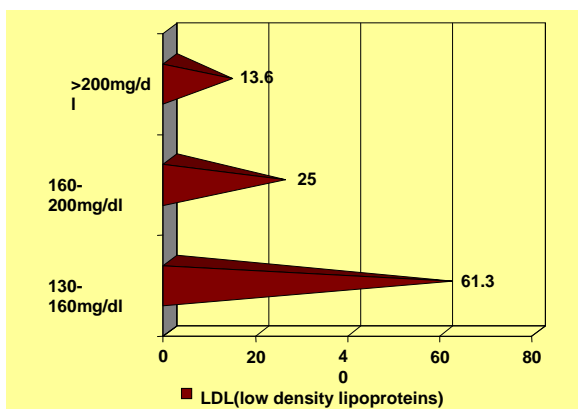
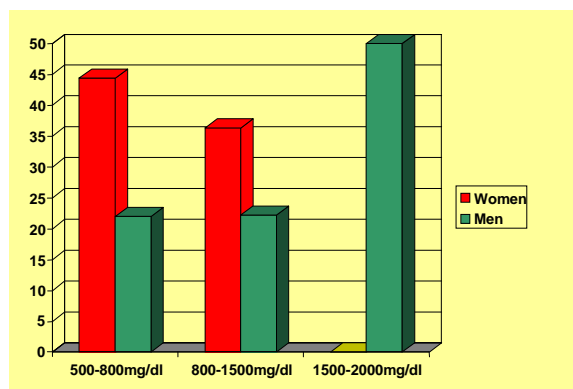**Figure 5.** *HDL values intervals, analyzed by the gender criterion*
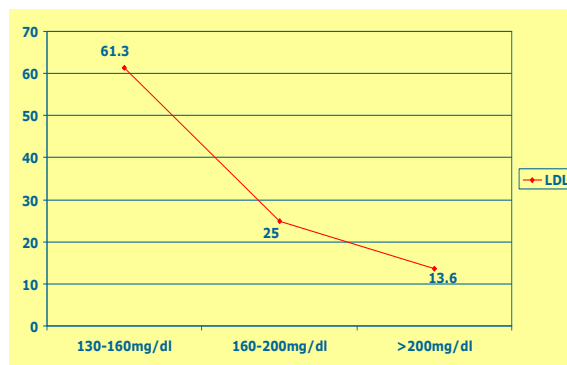
Figure 7. *The percentage of patients compared to the growth intervals of the post-treatment LDL-cholesterol*

Regarding the serous levels of the LDL-Cholesterol in the pre-treatment phase, most of the patients display slight increases (61.3%) and only a small part display increases of over 200 mg/dl. (figure 6)

Figure 6. *The percentage of patients compared to the growth intervals of the pre-treatment LDL-cholesterol*

The serous values of the post-treatment LDL-cholesterol stresses upon its greatest normalization percentage in the 61.3% 130-160 mg/dl initial interval and the most reduced percentage in the over 200 mg/dl initial interval. (figure 7)

Concerning the total lipids, the predominant pre-treatment serous concentrations stand for 33.8% and are mostly found in women, in the 800-1500 mg/dl interval. (figure 8)

Figure 8. *The gender distribution of the pre-treatment lipid levels*

The normalization of these levels subsequent to the treatment displays a slightly increased percentage in women, compared to the men (18.6%, respectively 15.2%). (figure 9)
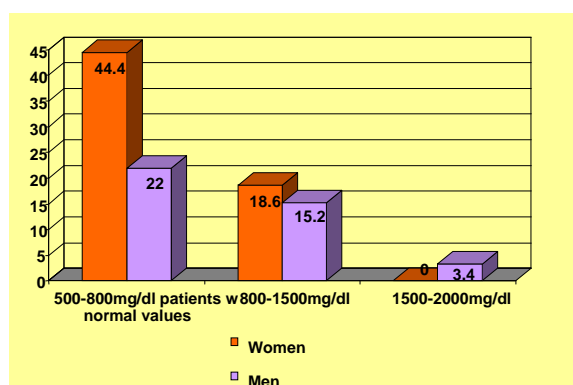
Figure 9. *The gender distribution of the post-treatment lipid level*

4.Conclusions

There are at least 7 unhealthy eating habits:

-The junk food;

-The starvation;

-The sugar, white flower, caffeine and simple carbohydrates ;

-Skipping breakfast;

-The lack in physical exercises;

-Insufficient water consumption;

-An amount of calories surpassing the daily need.

These eating habits lead to sometimes severe metabolic disorders

The study has shown that although the investigated patients have been randomly selected, the majority had problems with the blood's lipid levels, mostly due to an inadequate diet.

Although a treatment aiming the reduction of the lipid levels has been started, the number of patients having reached normal levels again has been extremely reduced, due to them abandoning the medication and returning to their old habits (fat consumption, alcohol).

Not treating the patients with cholesterol values situated in the 200-230 mg/dl led to an increase in the patients suffering from disorders induced by the deteriorations of the lipidic metabolism: AVC, HTA, coronary disorders and arteriosclerosis.

The lack of medical education regarding the hypertensive illness has proven that the majority of the patients give up the hypercholesterolemia treatment, only continuing the HTA one, not being aware that the hypercholesterolemia maintains the HTA.

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