

Research Article

Attitudes of Patients with Hypercholesterolemia in a Primary Health Care Center in the North of Saudi Arabia

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Abstract

Introduction: Hypercholesterolemia represents a public health problem in Saudi Arabia (SA), to be 15% in males and 19% in females. Many epidemiological studies since then have confirmed this association and have shown a several-fold increase in coronary deaths among diabetic subjects. Here, we investigated the level of attitudes regarding hypercholesterolemia on diabetic patients.

Methodology: This is a cross sectional study conducted on adult patients who attending primary health care diabetic clinics in which they explored their attitudes about hypercholesterolemia. This study took place on July 2015 in primary health care diabetic clinics, Arar, SA. All ethical approvals and considerations from patients and relevant authorities were secured.

Results: This study demonstrated a considerable lack of attitudes about hypercholesterolemia among diabetic patients attending primary health care clinics. The findings contribute to the increase in coronary events among diabetic patients especially females and low educated people where there was great lack of attitudes among them. The lack of attitudes may be related to the cultural values of the community.

Conclusion: A huge effort should be delivered through primary health clinics, or any other opportunity to deliver instructions about patient illness, is crucial so they are knowledgeable and aware about their condition and their risk factors.

Keywords: Hypercholesterolemia; Saudi Arabia; Health care

Introduction

Cardiovascular diseases are leading cause of death, and its incidence has changed in recent years. Cardiovascular events are the ultimate result of interactions of several risk factors, such as hypertension,

smoking, obesity, diabetes mellitus (DM) and hypercholesterolemia. Hypercholesterolemia represents a public health problem worldwide. It requires continual medical care to reduce the risk of complications (Figure 1). In Saudi Arabia (SA), a number of studies showed the prevalence of high levels of cholesterol (>5.2mmol average) to be 15% in males and 19% in females (refl).

DM is also a major health problem and represents a known risk factor for cardiovascular disease. The overall prevalence in of DM in adults in SA is 23.7% [1-3]. Patients' attitudes and their understanding about hypercholesterolemia are crucial in order to prevent complications. Dyslipidemia, which has a frequent occurrence among diabetics, has been shown to be the main contributor to the increased incidence of coronary events and deaths among diabetic subjects. The association between atherosclerosis, dyslipidemia and DM was recognized as early as 1927 when Joslin et al. [4] suggested that the cause of premature development of atherosclerosis among diabetic subjects was related to excess fat.

There is growing evidence to suggest that patient education for people with a chronic disease such as DM is an essential component of effective disease management. Three comprehensive reviews of the patient education literature converge on 2 general findings. First, any education is better than none, i.e. education in any form (pamphlets, films, lectures, behavioral modification techniques) is more likely to produce improved regimen compliance and physiologic outcomes by comparison with routine chronic care without any formal patient education. The second general finding is that all types of patients' education programs are not equal [5].

Previous local and regional studies linked the risk of hypertension and diabetes to lipid concentrations. Epidemiological studies since then have confirmed this association and have shown a several-fold increase in coronary deaths among diabetic subjects when compared with non-diabetics. The reported prevalence of diabetic dyslipidemia has varied from 25% to 60% [5-9].

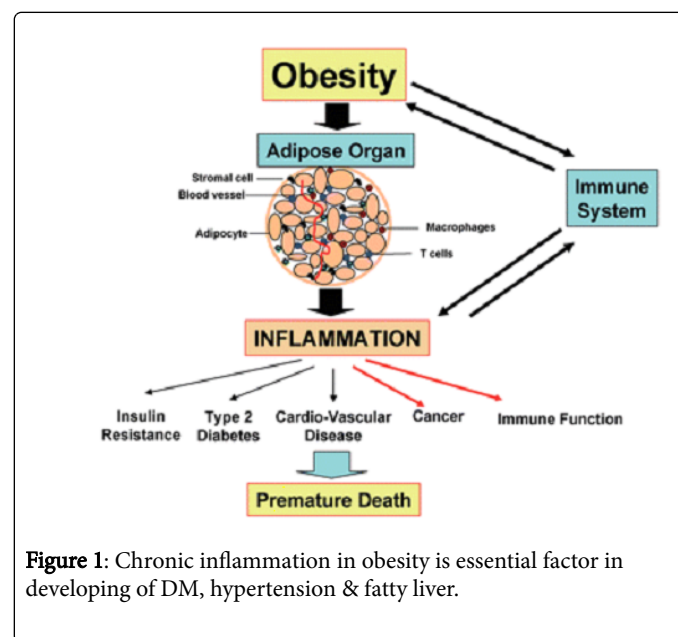


Figure 1: Chronic inflammation in obesity is essential factor in developing of DM, hypertension & fatty liver.

The differential effectiveness of didactic and behaviorally-oriented patient education was also studied. They found behaviorally-oriented

patient education to be 150-300% more potent than didactic programs. As such, there is a need to investigate the knowledge, attitudes of diabetic patients to be utilized in future development of programs and techniques for effective health education and health promotion. Therefore, the aim of this study is to evaluate the level of attitudes regarding hypercholesterolemia, of Saudi diabetic patients.

Methodology

A cross sectional study was conducted on adult patients who were attending primary health care diabetic clinics and which explored their attitudes about hypercholesterolemia.

The study was conducted between July-December 2015, primary health care centers, MOH, Arar, Saudi Arabia, and used a questionnaire lickert-scale. All participants provided informed consent before enrollment in the study. The study protocol conformed to the ethical guidelines of the 1975 Declaration of Helsinki and was approved by the ethics committees of Military Medical Campus-Dhahran, KSA. All data were checked during the study for accuracy and then coded and analyzed using Statistical Package of Social Sciences (SPSS) Version 10. A 'p' value of less than 0.05 was considered significant. The data was collected through an interviewer-administered questionnaire. Patients were interviewed by the investigator during the clinic time. Questions included demographic data and questions regarding patients' knowledge and attitudes. The questionnaires were conducted on daily basis. Beside questions of demographic data, patients were asked about the duration of DM, history of admissions and the reason for these admissions, history of hypertension (and its duration) and whether they suffer any chronic illness or morbidity.

Attitudes of patients were assessed by the following:

1. Patients were asked first whether hypercholesterolemia is a problem that patients need to take precautions against, or not
2. Attitudes of patients towards exercise
3. Attitudes of patients about life style
4. Attitudes of patients about food
5. Patients fear of cardiac illness

Results

A total of 141 patients were interviewed by the investigators from two primary diabetic clinics. The mean age of the population studied was 55.6+/-14 years. The average duration of DM was 9 years. The demographic profile of the patients is shown in Table 1.

Age	No.	(%)
30 - 39 Years	23	16.3
40 - 49 Years	24	17.0
50 - 59 Years	31	22.0
60 and above	63	44.7
(Mean Age 55.6)		
Sex	No.	(%)
Male	99	70.2

Female	42	29.8
Marital Status	No.	(%)
Single	3	2.1
Married	126	89.4
Widowed	12	8.5
Occupation	No.	(%)
Military	33	23.4
Employee	12	8.5
House Wife	33	23.4
Retired	45	31.4
Others	18	12.8
Education Level	No.	(%)
Illiterate	45	31.9
Read and Write	18	12.8
Elementary	45	31.9
High School	21	14.9
College and Higher	12	8.5

Table 1: Summary table showing demographic characteristic of study population

Patients attitudes towards Sport & Food & Lifestyle and fear of cardiac disease

There was a statistical difference in attitude of patients towards the necessity of conducting exercise regularly; of the entire group of 141 patients) interviewed (87%) indicated that they there is necessity of conducting regular exercise. All 63 patients aged over 60 years indicated that they are unable to exercise regularly, and this was also true of approximately two thirds of those aged between 40-60 years. Only 4% of female patients indicated they are taking part in regular sport, in contrast, one third of male patients indicated that they are involved in regular sporting pursuits. All the housewives indicated they are not taking part in regular sport, and this was true of all patients in the employed group. Almost all retired patients indicated that they are taking part in regular sport, while, about 50% of the smokers indicated that they are not sporting regularly, while only 3 patients (of 12 ex-smokers) said they are taking part in sports. In general, most patients were not taking part in sport, especially of those of lower education. Majority of the illiterate patients said they do not take part in sport.

Then, patients were asked whether they depend on fast food or not. Less than 5% of the entire study group indicated that their food intake was focused on fast food. This was more prevalent in the youngest group. Almost 50% of military patients agreed they cannot control their eating at public parties; third of the retired patients indicated the same. This problem was less prevalent in the other 'occupation' groups. Only 15% of patients with just an elementary education indicated they depended on fast food. More than 90% of patients indicated that they do not depend on fast food. 75% of housewife patients, and all of the

military patients, indicated that they do not prefer their lifestyle as it is now.

Finally, a question was asked of the patients as to whether they are afraid of cardiac disease. 79% of patients with hypercholesterolemia expressed their fear of cardiac disease, while only (55%) of the non-hypertensive patients indicated the same concern.

Discussion

The present study has attempted to study the attitude of Saudi diabetic patients toward hypercholesterolemia, in primary health care diabetic clinics, Arar, SA.

The fact that 25% patients in the older age group (above 60 years) did not know that hypercholesterolemic patients must undertake regular exercise, indicated inappropriate attitudes as well as inappropriate knowledge. Males showed a more positive attitude towards exercise by comparison with the females; this probably reflects cultural values of the community. In this study, nearly 75% of patients indicated that they do not conduct sport regularly, in the older age group and the female patients. Most of the military patients indicated that they are taking part in regular sport, suggesting this good attitude is precipitated by their job. On the contrary, housewives and retired patients reported far less participation in sport. This finding was in agreement with Al-Hazza's et al. [10]. This fact should be used appropriately in the clinic, and in health education, to change the behavior of the patients. It was found that most of the risky groups have bad attitudes is crucial. It was found that the majority of patients with the longest duration of diabetes do not take part in sport. All of them agreed that they were not taking part in regular sport, a finding that was also found to be true of most of the smokers.

There is a trend of higher consuming per capita in Saudi Arabia; (90%) oils and fat, (200%) animal protein, (207%) meat, (68%) sugar, have been reported in Saudi Arabia over the past two decades [11]. There is higher consumption of sugar rich food, meat and other animal products and was found to be associated with an increase in CVA, cancer, obesity, DM and gall stones [12]. In this study, 57% of patients indicated that they were unable to control themselves in public parties, and this was especially true amongst the low educated patients and the military personnel. Special attention should be provided to these patients. Although females were less knowledgeable, nevertheless they showed a better attitude, and perhaps this can be used and focused on to their benefit. Most of the housewives, and all the military personnel, indicated that they do not like their life as it is now, with no intervention. Since most of the patients are responsible for their families. Newly diagnosed diabetics (0-4 years) indicated they like their life as it is now. This is probably due to their lack of awareness of the illness, while older patients or those who have been previously admitted to hospital, and probably have already been exposed to complications are more concerned. It was good to notice that more than 80% of patients expressed their fear of cardiac diseases, and this was a good attitude in patients towards their illness.

Several recent local studies showed a clear relationship between DM and cardiovascular diseases in Saudi Arabia. These studies are in agreement with our findings and proposed possible multi-factorial pathways for managing DM complications and worthy further local investigations [13-20].

In conclusion, this study demonstrated a considerable lack of attitudes about hypercholesterolemia, among diabetic patients. Such

findings contribute to the increase in coronary events among diabetic patients especially females and low educated people where there was great lack of attitude among them.

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