

Analysis of Relationship of Obesity and Diabetes Mellitus in Local Population of Pakistan



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Abstract

Introduction: Worldwide, Indo-Asian people are among the populations at highest risk for cardiovascular disease. Evidence also suggests that associations between body mass index (BMI), percentage of body fat and chronic disease may differ between Indo-Asian and European populations.

Objectives of the study: Our study objective is to find the analysis of relationship of obesity and diabetes mellitus in local population of Pakistan.

Methodology of the study: The study was conducted at Jinnah Hospital Lahore during 2017 to 2018. There was 100 patients which was visit the hospital during this time period. We assess the nutritional and economic health of patients by asking some survey questions.

Analysis and results: The demographic and social values shows that obesity has a direct link with diabetes. It shows that people consume more protein and fat as compared to carbohydrates. Due to this reason they may suffer from other diseases parallel to diabetes.

Conclusion: It is concluded that there is a direct relationship of obesity and diabetes. If the diabetic person does not follow the instructions related to diet they must lead to some other issues which may lead to death.

Keywords: Diabetes; Obesity; Diseases

Introduction

Diabetes is a major cause of mortality globally, and it has been estimated that 400 million people worldwide will suffer from it by 2030. Despite the fact that hereditary qualities seems to assume an essential part in the advancement of diabetes, examine recommends that dietary decisions driven by natural and financial components are of critical significance. Amazing eating regimens assume an essential part in diabetes avoidance [1]. Suitable dietary adherence can enhance insulin affectability and glycemic control, and consequently add to way of life change and general personal satisfaction. Worldwide, Indo-Asian people are among the populations at highest risk for cardiovascular disease [2]. Evidence also suggests that associations between body mass index (BMI), percentage of body fat and chronic disease may differ between Indo-Asian and European populations [3]. One proposed explanation for these observations is the effect of poverty and resultant malnutrition during intrauterine and early childhood years, coupled with relative over nutrition in later years [4].

The 2013 American Diabetes Association (ADA) standards of care prescribe an individualized way to deal with basic leadership as to protein admission and dietary macronutrient composition [3]. Factors to be considered incorporate the metabolic status of the patient (e.g., lipid profile, renal capacity) and additionally food inclinations [5]. With regards to diabetes, the monetary moderateness (e.g., food security), availability, and agreeableness (e.g., food culture) have been talked about as potential boundaries to meeting and adherence to prescribed dietary rules [6]. The eating routine wellbeing behavior of diabetes patients and techniques to conquer potential obstructions to adherence to prescribed dietary rules are key general wellbeing and diabetes wellbeing concern. In this manner, there is have to measure the connection between eat less quality, corpulence, and diabetes [7].

Objectives of the Study

Our study objective is to find the analysis of relationship of obesity and diabetes mellitus in local population of Pakistan.

Methodology of the Study

The study was conducted at Jinnah Hospital Lahore during 2017 to 2018. There was 100 patients which was visit the hospital during this time period. We assess the nutritional and economic health of patients by asking some survey questions. From the large pool of data we select health status, diet quality, lifestyle, food culture, food security, and demographic information of the selected patients. The economic and health status describe the level of awareness regarding disease. The collected data were analyzed using SPSS software (version 17). The results are presented as a mean with 95% confidence interval limits or standard deviations. The significant value for P <.05 was accepted as statistically significant.

Analysis and Results

The data was collected from 100 male and females patients who visit the health care center. The analysis of the data shows that diabetes is more common in females as compared to males. We also collect the basic characteristics of patients and compared these values with normal values. So we can find that diseases person have more blood pressure value as compared to normal. People who suffer from diabetes also suffer from high blood pressure problem (Tables 1-3).

Table 1: Basic characteristics of patients.

Diseases age	35±5
Poor class	49%
Middle class	40%
Upper class	10.7%
educated	11.7%
Illiterate	55%
Active life style	25%
Normal life style	67%

Table 2: Demographic characteristics and history of patients.

Variables	Co-efficient	SE
Blood pressure	0.048	0.35
Healthy eating index (HEI)	-0.059	0.05
Smoker	0.060	0.80
Food security	0.106	0.12
Drinker	-0.343	0.08
Belong to city area	0.057	0.01
Belong to rural area	0.59	0.70
BMI	0.5460.24	

Note: explains the demographical conditions of the patients. This table explains the co-efficient and standard error values. The level of confidence interval is 90 and 95 in this table for the significant value.

Indicate significance at the 99, 95, and 90% level.

Table 03 explains the relationship between dietary intake, BMI and diet quality among diabetic patients. It shows that people consume more protein and fat as compared to carbohydrates. Due to this reason they may suffer from other diseases parallel to diabetes.

Table 3: Relationship between supplement intake, BMI, and diet quality among diabetes patients.

Variables	Co-efficient	SE
Dietary supplements		
Carbohydrate	0.019	0.03
Protein	0.061	0.08
Amino acid	0.106	0.19
Fat	0.434	0.02
Lipids	0.057	0.01
Body Mass Index		
BMI of diseased person	0.29	0.07

Discussion

A worldwide epidemic exists with respect to diabetes mellitus because of increased rates of obesity. There is a significant correlation between obesity and insulin resistance and obesity causes the increase in the severity of the disease [8]. The adipose tissues in the visceral region function as an endocrine organ that produces certain proteins with role in glucose homeostasis. The expression level of some of these proteins is increased in diabetes and can serve as specific marker of the disease [9]. The study was performed to check the effect of various physical and biochemical parameters of obesity on the development and progression of diabetes mellitus. In our study the serum samples of diabetics were collected and were further categorized into two groups i.e. diabetic obese and diabetic non obese, on the basis of BMI, waist circumference and waist to hip ratio. The fasting blood sugar level, the total protein content, along with the complete lipid profile was performed [10].

As an outcome, these patients devoured diets with a lower glycemic record and glycemic stack esteems as contrasted and patients in the unhealthy eating pattern. Presently, diets with a low glycemic list have been related with enhanced glycemic control [11-15]. Another supplement likely identified with the best watched glycemic control in our investigation is dietary fiber. In like manner, in our patients in the healthy eating pattern, a higher aggregate, dissolvable, and insoluble fiber utilization was watched. It has just been exhibited that a high fiber intake was related with better glycemic control in patients with diabetes. In any case, up to now, the advantageous effects of fiber intake, particularly solvent fibers, couldn't be detached from the effects of glycemic list and glycemic stack in light of the fact that most foods that have a low glycemic file additionally have a high fiber content [16].

Conclusion

It is concluded that there is a direct relationship of obesity and diabetes. If the diabetic person does not follow the instructions related to diet they must lead to some other issues which may lead to death.

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