Study some of the factors affecting the incidence of diabetes in the employed segment in basra city

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Abstract

Diabetes mellitus (DM) is a lifelong metabolic disease, considered often as an epidemic problem that leads to a reduction in quality and expectancy of life. There is an increasing prevalence of DM throughout the world as a result of changing dietary patterns and decreased physical activity.

The aim of this study is to identify some of the factors that affect the incidence of diabetes at the employees ' segment in Basrah city.

A cross-sectional study was conducted among 120 patients with type 2 diabetes that included 85 male and 35 females.

The results have reflected the apparent effect of age, obesity, Genetic history on diabetes, thus Confirmed by the statistical side of the medical opinion and No effect of smoking on diabetes .

The results showed the apparent effect factor for age, genetic history and obesity on diabetes while the results confirmed the lack of influence of sex and smoking on diabetes.

INTRODUCTION

Diabetes is a chronic disease that occurs when the pancreas is unable to produce insulin in sufficient quantity, or when the body is unable to use effectively the insulin it produces. Insulin is a hormone that regulates the level of sugar by Hyperglycemia or hyperglycemia is a common effect in the body not controlling diabetes, and with time leads to severe damage in many organs of the body, especially nerves and blood vessels (World Health Organization, Geneva, 2016). Diabetes and its complications are an effective health problem and it gets more prevalent day by day and is stuck in civilized progress. the scientific progress has been able to reduce or eliminate Some are final. So it has become a problem that deserves to be studied and to stress the need to confront it At different levels of health, global and economic(International Diabetes Federation, accessed 2 November 2018).

Objectives of the study

The aim of this study is to identify some of the factors influencing the disease of diabetes In the city of Basrah.

Literature Review

The medical concept of diabetes mellitus (Mellitus Diabetes).

In his daily diet, he eats glucose, which is the source of his body

energy, the cells relies in many of its functions on glucose sugar (blood sugar) to keep the human in Good health, and presence of the pancreas and what it produces from the ensolin and glucose sugar is transported to Inside the cells, the ensolin helps to convert this sugar and food types to the Jalikogen

If the body is not excreted enough ensolin or does not use it adequately and properly, the glucose values It will rise in the blood that leads to the person's diabetes.

Diabetes Mellitus (Mellitus Diabetes) is defined as a defect in the process of carrying glucose inside the body The cause is a lack of secretion of the pancreas, lack of secretion or lack of efficacy of the ensolin And the consequent increase in blood sugar, thus a disturbance in the metabolism

For carbohydrates, protein and fats, due to different causes may be organic or psychic or because In the intake of sugars or due to hereditary factors, diabetes can cause significant complications And dangerous, as two of the third people die of the disease in the face of stroke or diseases

The heart, as the risk of death doubles among people with the disease if compared to non-infected Chronic diabetes causes the body's organs to fail to function,12 especially the eyes and heart

Kidneys, blood vessels and haematological (Amed *etal*.,2016).

.**- Types of diabetes mellitus:** Diabetes mellitus is classified into four types according to the organization classification

(Fatima *etal*.,2013)

Type 1

This type is called the old (IDDM) which diabetics depend on_____

The ensolin in treating them. Most patients of this type are young and infect the persons Between the ages (13-11) This type of diabetes requires a lifetime of insulin injections.

Constantly, the disease appears as an emergency and its symptoms are severe nausea, vomiting and drought

Type 2

Most people with this type of sugar are adults, their bodies are resistant to insulin, i.e. they are unable to take advantage of insulin properly. They must pay attention to the quality of their food and exercise in order to control Diabetes this type represents 90% of diabetics, which distinguishes it that patients have a high percentage of insulin in their blood and that the body cells have lost the sensation of this hormone) and a Many people in this type are over the age of 55, and those with a first-class relative are either parents or siblings with diabetes, and also have a history of high blood pressure or high cholesterol and there is no difference in the incidence of diabetes between the sexes during the age of 25 The first 5 years of the life of the injured, but the balance tends to the tendency of the gender of females after this age, that is, females are more likely to be infected with this type of male and obesity plays a big role in the incidence of this type of diabetes, obesity forms more than 70% of patients and obesity is concentrated (trunk Or ventral) (Shields etal.,2015).

Type three

this type of diabetes is similar to type 2 diabetes, and it gets 2-5% among pregnant women and the ratio increases with age and can continue or disappear after birth. Medical supervision is required during pregnancy (Naylor R,Philipson 2011).

METHODOLOGY

3-1 Design of the study: Descriptive, cross sectional study.

3-2Setting of the study : Basra University colleges and various schools in the city of Basra, different circles in the city of Basra,Basra city hospitals .

3-3 The sample of the study:

The study was descriptive. A sample of 120 patients with diabetes mellitus type 2 was taken from Basrah University colleges and various schools in Basra city, Basra government departments and Basra city hospitals. The information was collected through a direct interview with the injured, a query about the duration of the disease, the method used in the treatment, and the question of other diseases as well as habits and practices about diabetes. Information has been collected since December 2018 until February 2019.   .

In this sample, some factors have been relied on to measure the extent of they affect in the incidence of diabetes and these factors are (the patient's age , the patient's sex , the duration of the disease , the genetic predisposition to disease , the way the patient uses the treatment , the patient's awareness to take care of himself to minimize complications Diabetes).

3- **4 Statistical analysis**

Study sample data was analyzed using some descriptive statistic methods and using the statistical SPSS program.

RESULTS & DISCUSION

Table1 : Socio- demographic characteristics of the participants

Variable		No.	%
Sex	Male	85	83.70
	Female	35	16.29
Age	<25	0	0
	25-49	94	33.78
	50-65	26	66.21
Work place	The hospital	80	6666.
	Higher Education	19	83.15
	Education	21	5.17
Family history of diabetes	Positive	98	81.66
	Negative	22	18.33
Total		120	99.99

Table(1)   showing Socio- demographic characteristics of the participants, Results in this study showed that sex(35%) of the sample were females,(85%)of the sample were male,(94%) of the sample was Greater than 25 years,(80%)   were employed on the hospital,(19%) employed on higher education , (21%) employed on education and (98%) of them had positive family history of diabete

Question	Answer	No.	%
The duration of the disease	< 1 years	6	5
	< 10 years	89	74
	< 15 years	25	18
The Way you use it	diet	34	13
	pills	80	61
	Insulin	6	26
Do you have other diseases accompany	obesity	66	55
	Hy pertension	7	5
	Highgrease	47	39

Table 2:participants attitudes toward their illness

Table(1) showing participants attitudes toward their illness , Results in this study showed that the duration of the disease(5%) for < 1 years , (74%)for < 10 years and (18%) for < 15 years ,(13%) use diet (61%) use pills and (26%) use Insulin. (79%)smok20> cigarette (5%) have other diseases HY pretension

Tabe 3 : Variance Analysis Table using a program SpSS

Correlations

		infected	age	gender	somke	obesty	familyhistory
infected	Pearson Correlation	1	.543[**]	-.007	-.089	.175[*]	.413[**]
	Sig. (1-tailed)		.000	.470	.167	.028	.000
	N	120	120	120	120	120	120
age	Pearson Correlation	.543[**]	1	-.034	-.226[**]	-.092	.159[*]
	Sig. (1-tailed)	.000		.355	.007	.160	.041
	N	120	120	120	120	120	120
gender	Pearson Correlation	-.007	-.034	1	-.386[**]	.033	-.075
	Sig. (1-tailed)	.470	.355		.000	.361	.208
	N	120	120	120	120	120	120
somke	Pearson Correlation	-.089	-.226[**]	-.386[**]	1	.184[*]	.027
	Sig. (1-tailed)	.167	.007	.000		.022	.384
	N	120	120	120	120	120	120
obesty	Pearson Correlation	.175[*]	-.092	.033	.184[*]	1	.248[**]
	Sig. (1-tailed)	.028	.160	.361	.022		.003
	N	120	120	120	120	120	120
familyhistory	Pearson Correlation	.413[**]	.159[*]	-.075	.027	.248[**]	1
	Sig. (1-tailed)	.000	.041	.208	.384	.003	
	N	120	120	120	120	120	120

**. Correlation is significant at the 0.01 level (1-tailed).

*. Correlation is significant at the 0.05 level (1-tailed).

Data entered in the program as follows

X1) = The first factor is the patient's age (Age(1)

K= Age groups

K= 1,2.3…..5

Ages are divided into different categories

<15= 0   years

8

15-50=1 Years

>= 2 years   50

2)   GENDER   (X2) The second   factor is the patient's gender(male = 0

Female = 1

(3) obesity (x3) The third factor is the patient's obesity

Non obesity = 0

Obesity =1

(4) Smoking (x4) The fourth factor is the patient's smoking

Non smoking = 0

Smoking = 1

(5) genetic factor (x5) The fifth factor is the patient's genetic factor

Non genetic factor = 0

Genetic factor = 1

No luck in table (3) that the level of the function of the independent variable(X1) age equals (0.00) which is less than (0.05) so we reject the imposition of the absence that provides the existence of effect concerning the age of the person in the incidence of diabetes That is, the age of the injured has a effect on the disease.

We note that the level of the function of the independent variable (X2) sex equals(0.470) which is greater than(0.05), so we accept the imposition of the absence of effect on the sex of the person in the incidence of diabetes.

We note that the of the function of the independent variable X3 has reached zero and that value is much smaller than (0.05) so we reject the Hypothesis of non that the presence of effect of the body obesity in the incidence of diabetes, which means that this factor has a significant effect

in the incidence of the disease and that the result of medical opinion the more the level person is overweight the better the chance of getting.

We also note that the function level of the independent of smoking(X4) equals 0.167, which is greater than(0.05) i.e., there is no effect for smoking on diabetes and we not the function level of Genetic history(X5) equals(0 .000),which is smaller than (0.05) ther is effect for Genetic history on diabetes .

 These results were consistent with (Abdullah Sal-Goblan *etal*,2014)
and (waynegao etal.,2018)   who find the Excess weight affects two thirds of the U.S. adult population and increases risk for cardiovascular disease and diabetes. All patients should be screened for obesity and most should be screened for pre-diabetes and diabetes. The best treatment for diabetes is prevention. Prevention of diabetes can be accomplished through a 7% weight loss through intensive lifestyle interventions that include caloric reduction and approximately 30 min of daily moderate physical activity. Practitioners will have access to these evidence-based programs soon. The Centers for Disease Control and Prevention are promoting community-based diabetes prevention programs throughout the country.

CONCLUSIONS & RECOMMENDATIONS

CONCLUSIONS:

1-There is a high effect of the variable (x1) that represents the age of the person and this means the greater the age of the person was more prone to diabetes .

2-There is no effect of the variable (x2) that represents the genus of person on diabetes mellitus.

3-There is impact to the variable (x3) which represents the weight of the body, which means the higher the body weight, the higher the likelihood of diabetes and this corresponds to the medical opinion.

4-There is a high effect of the variable (x5) Which represents the genetic factor that means whenever a person has a hereditary history, The higher the incidence of the disease.

5-There is no effect of the variable (x4) that represents the smoking on diabetes mellitus.

RECOMMENDATIONS:

1-We recommend that you continue to conduct statistical and non-statistical research on diabetes due to the abundance and severity of the disease in order to be more informed about solutions to reduce and cure it.

2- We recommend conducting statistical research on the impact of other causative factors, such as sudden shocks, psychological condition, and other factors that have not been examined.

References

1. American Diabetes Association Diagnosis and classification of diabetes mellitus. Diabetes Care 2012;35:S64–71.

2. Amed S, Oram R. Maturity-Onset Diabetes of the Young (MODY): Making the right diagnosis to optimize treatment. Can J Diabetes 2016;40:449–54.

3. De Franco E, Flanagan SE, Houghton JA, et al. The effect of early, comprehensive genomic testing on clinical care in neonatal diabetes: An international cohort study. Lancet 2015;386:957–63.

4-International Diabetes Federation, 'About World Diabetes Day', accessed 2 November 2018

5- Global Action Plan for the Prevention and Control of Noncommunicable diseases 2013-2020 (World Health Organization, Geneva, 2016)

6. Shields BM, Peters JL, Cooper C, et al. Can clinical features be used to differentiate type 1 from type 2 diabetes? A systematic review of the literature. BMJ Open 2015;5:e009088.

7. Fatima A, Khawaja KI, Burney S, et al. Type 1 and type 2 diabetes mellitus: Are they mutually exclusive? Singapore Med J 2013;54:396–400.

8. Naylor R, Philipson LH. Who should have genetic testing for maturity-onset diabetes of the young? Clin Endocrinol (Oxf) 2011;75:422–6.

9. Patel P, Macerollo A. Diabetes mellitus: Diagnosis and screening. Am Fam Physician 2010;81:863–70.

10. Unger RH, Grundy S. Hyperglycaemia as an inducer as well as a consequence of impaired islet cell function and insulin resistance:

Implications for the management of diabetes. Diabetologia 1985;28:119–21.

11. Jones AG, Hattersley AT. The clinical utility of C-peptide measurement in the care of patients with diabetes. Diabet Med 2013;30:803–17. 11. R

12- Wayne Gao, Enkhzaya chuluunbaatan chi pang wen- smokers with diabetes:Twice as deadly and shortened life by 15 years. Tob. Indue. Dis.2018.

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