Epidemiological Profile of Diabetes Mellitus Patients in Diabetes Center in King Salman Specialist Hospital Hail Region Saudi Arabia

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Introduction

Some of the causal factors of diabetes mellitus include certain drugs, genetic defects and gestation hormonal environment. This period between 1980 and 2014 has seen the incidence of diabetes increase four times. The study will seek to identify complications and risk factors of diabetes by focusing on epidemiological occurrence of Diabetes mellitus.

Objectives of the study:

1. Investigate the degree of association between the specific and epidemiologic factors and diabetes in the Hail Region of Saudi Arabia
2. Identify complications and risk factors of diabetes

Methods

Study Design: A Retrospective Cross-Sectional Study.

Study Area: Eligible study cases will be recruited from the king Salman specialist in hail in Hail governmental hospital of the Ministry of health.

Sample Size: It will adopt 5000 cases of Diabetes Mellitus patients at Diabetes Center in king Salman Specialist hospital .

Statistical analyses

The data collected was analyzed using SPSS software. the collected information was entered in the RED cap. The records were then saved on the Diabetes Center in the King Salman Specialists hospital servers for security purposes and integrity. The system used provided a data management approach that enabled easy data entry and analysis using the statistical software. The conducted a one-way analysis on the information entered into the SPSS. The Chi-squares on the other hand was used to identify variations between demographics and treatment traits.

Results

Table1. association between patient demographics and treatment traits.

Treatment traits	Description	Number of Males (%)	Number of Females (%)	P-value
New or Follow-up	Follow-up	584 (45.1)	712 (54.9)	0.124
	New	1578 (42.6)	2126 (57.4)	
Walk-in or appointment	Appointment	1248 (42.6)	1680 (57.4)	0.295
	Walk-in	914 (44.1)	1158 (55.9)	
Patient seen as scheduled	Yes	1999 (43.2)	2625 (56.8)	0.964
	No	163 (43.4)	213 (56.6)	
Diabetic type	Type 1	160 (48.6)	169 (51.4)	0.038
	Type 2	1690 (42.7)	2264 (57.3)	
Following the last 6 months	Yes	293 (39.2)	454 (60.8)	0.016
	No	1869 (43.9)	2384 (56.1)	

Table 2: disparities across gender.

	t	df	Sig. (2-tailed)	Mean Difference
Age	-0.63	4998	0.527	-0.27
Last Creatinine result	18.57	4833	0.000	27.52
Last low-density lipoprotein result	-5.71	4717	0.000	-0.15
Hemoglobin test result	19.94	877	0.000	2.07
Body mass weight	-2.93	4924	0.003	-3.22
Last glycohemoglobin test results	-10.62	4786	0.000	-0.47

Table 3: Group Statistics by Diabetic Type.

Variable	Diabetic Type	N	Mean	Std. Deviation	Std. Error Mean
Age	Type 1	329	22.11	8.47	0.47
	Type 2	3954	56.53	11.82	0.19
Last Creatinine result	Type 1	311	67.53	69.70	3.95
	Type 2	3817	76.88	51.58	0.83
Last low-density lipoprotein result	Type 1	294	2.99	1.00	0.06
	Type 2	3732	2.85	0.92	0.02
Hemoglobin test result	Type 1	35	14.81	1.87	0.32
	Type 2	470	13.95	1.87	0.09
Body mass weight	Type 1	321	27.06	43.63	2.44
	Type 2	3892	33.36	10.43	0.17
Last glycohemoglobin test results	Type 1	312	9.19	1.43	0.08
	Type 2	3770	8.33	1.52	0.02

Table 4: Multiple Regression Results.

	(1)	(2)	(3)	(4)
Variables	Glycohemoglobin levels	Creatinine	Hemoglobin	Low-density lipoprotein
Age	-0.008***	0.615***	-0.014***	-0.009***
	(0.001)	(0.051)	(0.004)	(0.001)
Body Mass Index	-0.001	-0.027	-0.001	-0.001
	(0.001)	(0.020)	(0.001)	(0.001)
Constant	8.81***	43.720***	14.809***	3.386***
	(0.086)	(2.936)	(0.236)	(0.057)
N	4,729	4,775	876	4,663
P-value	0.000	0.000	0.002	0.000
R^2	0.006	0.030	0.014	0.023

Discussion

- The study focused on examining the existing relationship between specific epidemiologic factors of diabetes in the Hail Region of Saudi Arabia.
- The incidence, prevalence, morbidity and morality alongside the history of the study group are all significant in examining the incidence and prevalence of the diabetes.
- The study was successful in elucidating gender-status connections, new or follow up cases and gender schedule connection.
- In articulating diabetes epidemiology, some of the fundamental demographical factors to put into consideration include age, ethnicity and gender.

the major study strength and limitations.

One of the key strengths of this study is the use of a large sample size that makes it easy to generalize findings of the study to the general population.

Secondly, the study has used an effective research methodology that resulting to collection of high quality data. Thirdly, the method used to collect data was effective eradicated possibility of an error. However one of the main limitations of this study is that it lack of enough financial resources to complete the study and limited time to complete it.

Conclusion/Recommendation

The study established various aspects of the disorder related to the study group like ignorance of health practices, unawareness of insulin injection and healthy dietary habits. Visceral obesity (associated with insulin resistance),hypertension, and dyslipidemia are common in patients with T2DM. The IDF highlighted that diabetes consumes 10 percent of global expenditure

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