



CODEN [USA]: IAJ PBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.1489179>Available online at: <http://www.iajps.com>

Research Article

**STUDY TO KNOW ASSOCIATION OF TYPE II DIABETES
MELLITUS WITH FAMILY HISTORY AND ITS
PREVELANCE AMONG THEM****¹Dr. Javed Iqbal, ²Dr. Hafsa Afzaal, ³Dr. Muhammad Said Nawaz**¹MO at BHU Daulat Abad, Vehari, Pakistan²Jinnah hospital, Lahore³Combined Military Hospital, Lahore**Abstract:**

Objective: To determine the prevalence of Type 2 diabetes and its association with family history of type 2 diabetes mellitus (T2DM).

Study Design: A descriptive cross-sectional study.

Place and Duration: In the medicine Unit II of Services Hospital, Lahore for one year duration from July 2017 to July 2018.

Methodology: The total patients included 175 male subjects aged 35 to 60 years. They were divided into 2 groups. Group A (Patients); type 2 diabetic were included in Group B (Controls); Seventy-five non-diabetic included. Type 2 diabetic patients were selected randomly from the Diabetic clinic. Non-diabetic subjects were selected twice according to date and fasting glucose samples. Date received after informed consent. Physical examination was performed and the questionnaire was completed. With SPSS version 17 data was analyzed.

Results: 72 patients (72%) of 100 subjects with type II diabetes had family history of T2DM and 28 (28%) patients had refused family history of T2DM. 75 non-diabetic subjects, 20 (26%) family history of diabetes, and 55 (74%) occurred, type 2 diabetes, family history rejected ($p = 0.007$) in the family with T2DM.

Conclusion: The family history of T2DM is important risk factor for the emergence of the disease an independently.

Key Words: Diabetes mellitus type 2, Family history, frequency.

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Please cite this article in press Javed Iqbal et al., Study to Know Association of Type II Diabetes Mellitus with Family History and Its Prevalance among Them., Indo Am. J. P. Sci, 2018; 05(11).

INTRODUCTION:

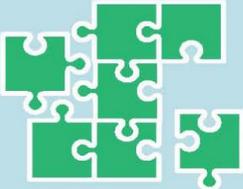
Diabetes mellitus is a metabolic disease identified by insulin deficiency-induced hyperglycemia or insulin resistance of the body's target organs. According to the WHO in 2000, worldwide 171 million people were diabetic and by 2030, the number of diabetic patients is estimated to exceed 366 million. Pakistan will reach 13.9 million cases in 2030 from 5.3 million cases in 2000. The most of the diabetic cases are divided into 2 sub-groups. The diabetes mellitus type 1 (DMT1), results in an severe decrease in insulin secretion. Diabetes mellitus type 2 (T2DM), the other more common category, is the resistance of the body's target organs to insulin action and insufficient and compensatory insulin secretion. Ninety percent of all diabetes cases fall into the second category. It was previously considered an aging disorder, but now the incidence of obesity is increasing in children. The pathogenesis of T2DM involves the interaction of environmental and genetic factors. In DM2 patients, a constant finding was Insulin resistance and before the onset of DM2 resistance persists for several years. In type 2 diabetics, 1st relatives have insulin resistance, meaning a strong genetic component in the development of T2DM, even at a normal glucose tolerance and non-obese time. Other scientific evidence has also shown a independent and gradual benefaction of a positive family history leads to the increased risk of diabetes in the US population. The

objective of this analysis was to determine the frequency and relationship of type 2 diabetes mellitus (T2DM) family in type 2 diabetics.

MATERIALS AND METHODS:

This descriptive cross-sectional study was held in the medicine Unit II of Services Hospital Lahore for one year duration from July 2017 to July 2018. The study population included one hundred seventy-five male subjects aged 35 to 60 years. They were divided into two groups. Group A (Patients); Face type 2 diabetic were included in Group B (Controls); Seventy-five non-diabetic included. Type 2 diabetic patients were randomly chosen from the Diabetes Service Center of the Lahore Institute of Medical Sciences. The non-diabetic subjects were selected according to the glucose sample and date on two occasions (after an overnight fast of 8 hours, the venous sample was starved). The sample was secured and checked by glucose. 11 of the enzyme-oxidase were above 100 mg / dl, subjects were not included in the study1). Written informed consent was obtained. Full demographic information and date were taken. Survey completed. Statistical analysis: data were analyzed and entered using SPSS version 18.0. Percentages and frequencies are given for qualitative variables. Chi-square test was applied to determine the relationship of T2DM family history with T2DM frequency. P <0.06 was taken significant statistically.

TYPE 2



BODY CANNOT USE INSULIN PROPERLY

- Can develop at any age
- Most cases can be prevented



Currently, at least 1 out of 3 people will develop the disease in their lifetime



More than 5,000 youth diagnosed each year in 2008 and 2009

RISK FACTORS FOR TYPE 2 DIABETES:

1.7 MILLION People 20 years and older diagnosed in 2012



BEING OVERWEIGHT



HAVING A FAMILY HISTORY



HAVING DIABETES WHILE PREGNANT (GESTATIONAL DIABETES)



TAKE THE DIABETES RISK TEST
www.cdc.gov/diabetes

WHAT CAN YOU DO?

You can **prevent** or **delay** type 2 diabetes



LOSE WEIGHT



EAT HEALTHY



BE MORE ACTIVE

LEARN MORE AT www.cdc.gov/diabetes/prevention OR SPEAK TO YOUR DOCTOR

You can **manage** diabetes



WORK WITH A HEALTH PROFESSIONAL



EAT HEALTHY



STAY ACTIVE

LEARN MORE AT www.cdc.gov/diabetes/ndep OR SPEAK TO YOUR DOCTOR

RESULTS:

Of 72 (72%) patients with type 2 diabetes, 72 (72%) had a history of T2DM and 28 (28%) patients rejected the T2DM family history. Of the 72 patients, 49 (68%) had a T2DM history, 19 (26.4%) had a family history of father and 4 (5.5%) had T2DM. 75 non-diabetic subjects, 20 (26%) family history of diabetes, and 55 (74%) occurred, type 2 diabetes, family history rejected ($p = 0.007$) in the family with T2DM frequency.

Association of family history of T2DM with frequency of T2DM

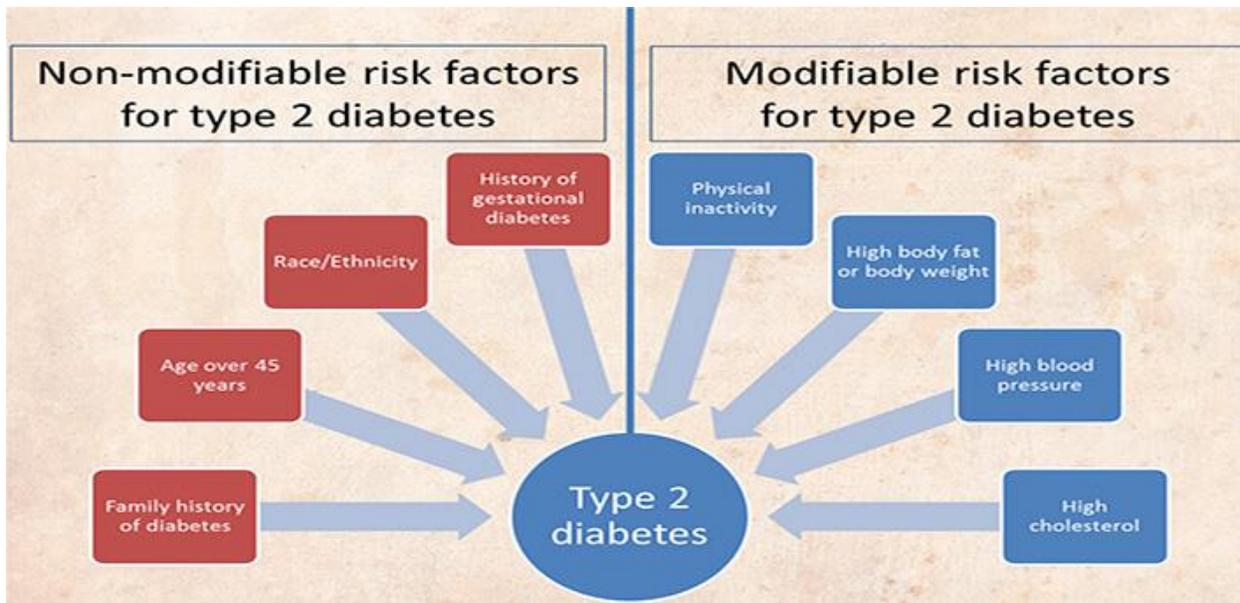
Family H/O T2DM	Diabetics	Non diabetics
Yes	72	20
No	28	55
Total	100	75

$X^2 = 7.28, p = 0.007, d = 1$

DISCUSSION:

This study demonstrated the relationship between T2DM frequency and T2DM family history. The relationship between family history and disease risk has been documented in some other scientific evidence. Compared to non-diabetics, normoglycemic youth and type 2 diabetics even have insulin resistance in the first-degree thin section.

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Valdez, et al. According to the Nutrition Examination Survey report and National Health survey (2007) Family diabetes history has an important, independent and gradual relationship with the incidence of diabetes. According to the family history, the risk of diabetes was increased to three levels high risk: In at least two relatives of first-line or first-degree and second-degree relatives of diabetes with the same lineage. Moderate: only a 2nd-degree relative with a 1st-degree relative and diabetes, or second-degree relatives with the same paternal and maternal diabetes. Mean: No family history, or second-degree relative with diabetes. Although the family history of diabetes in this study could not be compared with the above, the results of this study also reveal the importance of genetic predisposition for the type 2 diabetes mellitus development.

RISK FACTORS FOR TYPE 2 DIABETES



Have a family history of diabetes



Have a BMI ≥ 23.0 kg/m²



Lead an inactive lifestyle



Have high blood pressure



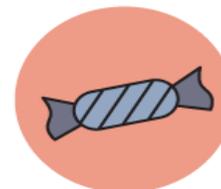
Have abnormal blood cholesterol/lipid levels



Have a history of gestational diabetes



Are ≥ 40 years old



Have impaired glucose tolerance or impaired fasting glucose

CONCLUSION:

The family history of T2DM should be used as a predictive tool in T2DM diagnosis and prevention programs.

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