

# ***Dedication***

**To my mother.....**

**To my father.....**

**To my  
brothers.....**

**To my  
sisters.....**

**To my  
friends.....**

**And  
my colleagues...**

**I dedicate this work with my best wishes to all.**

## **Acknowledgements**

All my thanks are in the name of Allah, the most Gracious and the most Merciful.

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## **Abstract**

The aim of this study was to determine the relationship between fasting blood glucose and HbA1c among diabetic patients.

A comparative cross sectional study was carried at Jabir Abuliz Specialized Diabetic Centre during November to December 2008.

Thirty three patients age ranged between 22-78 years (17 male), with diabetes were enrolled at this study. Fasting blood glucose (FBG) were collected three times from each patient one-week apart and measured; by the end of the month HbA1c was measured.

This study showed mean fasting blood glucose (MFBG) to be strongly correlated with HbA1c ( $r = 0.655$ ;  $p = 0.000$ ).

The study found significant correlation between fasting blood glucose and HbA1c. Fasting blood glucose and HbA1c was not influenced by age and sex.

## المقدمة

هدفت هذه الدراسة لتحديد العلاقة بين مستوى جلوكوز الدم لمرضى السكري (HbA1c) و الهيموقلوبين المجلکز (FBG) الصيامي.

و قد أجريت دراسة مقطعية للمقارنة في مركز جابر أوالعز . التخصصي لمرضى السكري في الفترة من نوفمبر إلي ديسمبر 2008

وقد أخذت العينات من 33 مريض تتراوح أعمارهم ما بين 22-78 (17 ذكور) و شملت هذه الدراسة مرضى السكري

ثلاث مرات و كان (FBG) تم قياس مستوى جلوكوز الدم الصيامي الفرق بين كل قراءة و الأخرى إسبوع و عند نهاية الشهر تم قياس (HbA1c) الهيموقلوبين المجلکز.

أظهرت هذه الدراسة أنه توجد علاقة قوية بين متوسط مستوى عند (HbA1c) و الهيموقلوبين المجلکز (FBG) جلوكوز الدم الصيامي . و قيمة  $r = 0.655$  = مستوى الدلالة 00.00

أثبتت هذه الدراسة أنه توجد علاقة بين مستوى جلوكوز الدم الصيامي مستوى الجلوكوز في الدم . (HbA1c) و الهيموقلوبين المجلکز (FBG) لا يتأثران بالعمر و الجنس. HbA1c و (FBG)

## Contents

Content .....	page
Dedication.....	I
Acknowledgments.....	II
Abstract.....	III
مستخلص الدراسة .....	IV
List of Contents.....	V
List of Tables.....	VIII
List of Figures.....	IX
List of Abbreviations.....	X

### Chapter One

1. Introduction and Literature review.....	1
1.1. Introduction.....	1
1.2. Literature review.....	4
1.2.1. Diabetes mellitus.....	4
1.2.2. Types of diabetes.....	4
1.2.2.1. Type 1 DM.....	4
1.2.2.2. Type 2 DM.....	4
1.2.2.3. Gestational DM.....	5
1.2.2.4. Other specific types.....	6
1.2.3. Other categories of DM.....	6
1.2.4. Diagnosis of DM.....	6
1.2.5. Other causes of DM.....	7

1.2.6. Glucose.....	7
1.2.6.1. Preanalytical.....	8
1.2.6.2. Reference values.....	10
1.2.6.3. Analytical.....	10
1.2.6.4. Methods of glucose measurement.....	11
1.2.6.5. Oral glucose tolerance test.....	13
1.2.7. Self-monitoring of blood glucose.....	15
1.2.8. Glycated hemoglobin.....	15
1.2.8.1 Sample collection, handling and storage.....	17
1.2.8.2. Reference intervals.....	17
1.2.8.3. Out-of-range specimens.....	18
1.2.8.4. Removal of labile GHb.....	18
1.3. Rationale and Objectives.....	19
1.3.1. Rationale.....	19
1.3.2. Objectives.....	20
<b>Chapter Two</b>	
2. Materials and Methods.....	21
2.1. Study design, area and population.....	21
2.2. Inclusion criteria.....	21
2.3. Exclusion criteria.....	21
2.4. Ethical consideration.....	21
2.5. Sample size.....	21
2.6. Specimens.....	22
2.7. Materials.....	23
2.8. Methodology.....	24
2.9. Tools of data collection.....	26
2.10. Data analysis.....	26

**Chapter Three**

3. Results..... 27

**Chapter Four**

4. Discussion..... 32

**Chapter Five**

5. Conclusion and Recommendations..... 33

5.1. Conclusion..... 33

5.2. Recommendations..... 34

References..... 35

Appendix



## List of Tables

Table Title.....	page
Table (3-1) the mean and SD of the age.....	27
Table (3-2) the correlation between FBG and HbA1c.....	31

## **List of Figures**

List of Figure.....	page
Figure (3-1) mean age (year) in male and female.....	28
Figure (3-2) the percentage of treatment.....	29
Figure (3-3) the duration of the disease.....	30

## **List of Abbreviations**

<b>AACE</b>	American Association of Clinical Endocrinology
<b>ADA</b>	American Diabetes Association
<b>ATP</b>	Adenosine Triphosphate
<b>CAP</b>	College of American Pathologists
<b>CV</b>	Coefficient of Variation
<b>DCCT</b>	Diabetes Control and Complications Trial
<b>DM</b>	Diabetes Mellitus
<b>EDTA</b>	Ethylenediaminetetraacetic Acid
<b>FBG</b>	Fasting Blood Glucose
<b>FPG</b>	Fasting Plasma Glucose
<b>GHb</b>	Glycated Hemoglobin
<b>GDM</b>	Gestational Diabetes Mellitus
<b>HbA1c</b>	Hemoglobin A1c
<b>IDDM</b>	Insulin-Dependent Diabetes Mellitus
<b>IDF</b>	International Diabetes Federation
<b>IFG</b>	Impaired Fasting Glucose
<b>IGT</b>	Impaired Glucose Tolerance
<b>NADP<sup>+</sup></b>	Nicotinamide Adenine Dinucleotide Phosphate
<b>NADPH</b>	Nicotinamide adenine dinucleotide phosphate hydrogen
<b>NCCLS</b>	National Committee for Clinical Laboratory Standards
<b>NGSP</b>	National Glycohemoglobin Standardization Program
<b>NIDDM</b>	Non-Insulin-Dependent Diabetes Mellitus

<b>OGTT</b>	Oral Glucose Tolerance Test
<b>SMBD</b>	Self-Monitoring of Blood Glucose
<b>T1DM</b>	Type 1 Diabetes Mellitus
<b>T2DM</b>	Type 2 Diabetes Mellitus
<b>UKPDS</b>	United Kingdom Prospective Diabetes Study
<b>WHO</b>	World Health Organization