RELATIONSHIP BETWEEN SERUM FETUIN –A LEVELS AND DEVELOPMENT OF DIABETIC FOOT

Thesis

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List of Contents

	Page No.
LIST OF ABBREVIATIONS	**I**
LIST OF TABLES	**IV**
LIST OF FIGURES	**VI**
INTRODUCTION AND AIM OF WORK	**1**
REVIEW OF LITERATURE	**4**
CHAPTER 1: Diabetic Foot	**4**
1-Introduction	**4**
2- Complications of Diabetes	**4**
3-Definition of diabetic foot	**5**
4- Epidemiology of diabetic foot disease	**6**
5- Etiopathogenesis of diabetic foot lesions	**6**
6- Peripheral Vascular Disease in Diabetes	**10**
7-Evaluation of diabetic foot	**11**
8- Clinical assessment of Diabetic foot	**14**
9- Management of Diabetic foot	**28**
CHAPTER 2: Fetuin A	**41**
1- Introduction	**41**
2- Structure of fetuin-A	**41**
3- Regulators of hepatic Fetuin-A expression	**42**
4-Clinical context of fetuin-A	**43**
5- High level of fetuin A	**51**

6-Low levels of fetuin A **53**

7-Biological Functions of Fetuin-A **55**

CHAPTER 3: Macrovascular Complication Of Diabetes 58

1-Introduction **58**

2- Pathophysiology and causative mechanisms **59**

3- Peripheral arterial disease with diabetes..... **62**

4- Diagnosis of PAD **64**

5- Risk factor modification **66**

6- Management **67**

MATERIALS AND METHODS 68

RESULTS 77

DISCUSSION 91

SUMMARY And CONCLUSION 102

RECOMMENDATIONS 106

REFERENCES 107

ARABIC SUMMARY .....

List of Abbreviations

Albumin:creatinine ratio	**(ACR)**
Angiotensin-converting-enzyme	**(ACE)**
Ankle Brachial Index	**(ABI)**
Basic calcium phosphate	**(BCP)**
Cerebrovascular accidents	**(CVAs)**
Charcot Neuropathy	**(CN)**
Complete blood count	**(CBC)**
Coronary kidney disease	**(CKD)**
Coronary vascular disease	**(CVD)**
C-reactive protein	**(CRP)**
End stage renal disease	**(ESRD)**
Erythrocyte sedimentation rate	**(ESR)**
Estimated glomerular filtration rate	**(eGFR)**
Glucose transporter-4	**(GLUT4)**
Glycogen synthase kinase	**(GSK-3)**
Glycohemoglobin	**(HbA1c)**
Hepatocellular carcinoma cell line genome	**(HepG2)**
High mobility group protein B1	**(HMGB1)**
Hyperbaric oxygen	**(HBO)**

Insulin receptor substrate	**(IRS)**
Insulin receptor substrate proteins	**(IRS-1)**
Lipopolysaccharide	**(LPS)**
Low-density lipoprotein	**(LDL)**
Lower extremity amputations	**(LEA)**
Matrix metalloproteinases	**(MMP)**
Methicillin-resistant staphylococcus aureus	**(MRSA)**
Mitogen-activated protein kinase	**(MAPK)**
Myocardial infarction	**(MI)**
National Institute for Health and Care Excellence	**(NICE)**
Negative pressure wound therapy	**(NPWT)**
Nicotinamide adenine dinucleotide phosphate	**(NADP)**
Nitric oxide	**(NO)**
Peripheral arterial disease	**(PAD)**
Peripheral vascular disease	**(PVD)**
Phosphatidyl inositol 3-kinase	**(PI3-K)**
Polymerase chain reaction	**(PCR)**
Protein kinase B	**(PKB)**
Protein kinase C	**(PK-C)**

Pulse-volume recording	**(PVR)**
Reactive oxygen species	**(ROS)**
Recombinant platelet derived growth factor	**(PDGF)**
Relative risk	**(RR)**
Removable Cast Walkers	**(RCW)**
Tissue growth factors	**(TGFs)**
Total Contact Cast	**(TCC)**
Ultrasonic duplex scanning	**(UDS)**
Vascular calification	**(VCs)**
Vascular smooth muscle cells	**(VSMCs)**
α2-Heremans-Schmid glycoprotein	**(Ahsg)**

List of Tables

Table No.		Page No.
Table (1):	Factors increasing the Risk of Diabetic Foot Ulceration and infection.....	14
Table (2):	Interpretation of the results of Ankle-Brachial Index measurement. (ABI)...	16
Table (3):	Medical History.	17
Table (4):	Lower extremity diabetic foot exam...	19
Table (5):	NICE guidance currently recommends that people with diabetes should be informed that risk Calculators give an estimate only.....	61
Table (6):	Risk Factors and Treatment Goals for Patients with Diabetes and PAD.....	66
Table (7):	Demographic and clinical variables of the studied groups	77
Table (8):	Duration and type of foot lesion.....	78
Table (9):	Duration of DM and use of oral hypoglycemic agents and insulin in the diabetic groups.....	79
Table(10):	Comparison of laboratory variables in the studied groups	80
Table(11):	Comparison of Fetuin A level in the studied groups.....	81

Table(12): Multivariable binary logistic regression model for predictors of diabetic foot lesions occurrence 83

Table(13): Comparison of the area under the ROC curves for discrimination between diabetics with or without diabetic foot using Fetuin A or the multivariable binary logistic regression model..... 84

Table(14): Correlation between Fetuin A level and relevant quantitative variables. 85

List of Figures

Fig. No.		Page
Fig (1):	Complications of diabetic foot.	9
Fig (2):	Show clinical and diagnostic approach to diabetic foot disorders.....	22
Fig (3):	The risk factors for amputation are multifactorial and similar to those for ulceration.....	24
Fig (4):	Charchot foot.....	26
Fig (5):	The diabetic foot services	37
Fig (6):	Charcot's Arthropathy	38
Fig (7):	Gangrene	38
Fig (8):	Bunion with Nail Changes	38
Fig (9):	Planter Infected Ulcer	38
Fig (10):	Hammer Toes	38
Fig (11):	Tinea Interdigitalies.....	39
Fig (12):	Self-Inspection.....	39
Fig (13):	Take care of Dry skin.....	39
Fig (14):	To see feet in mirror for redness, Swelling, ulcer or crack foot.....	39
Fig (15):	Cut the nails straight	39
Fig (16):	Removable cast walker	40

Fig. No.		Page
Fig (17):	Scotchcast boot	40
Fig (18):	Structure of Fetuin A	42
Fig (19):	Increased Fetuin A in obesity and fatty liver	44
Fig (20):	Insulin receptor pathways	45
Fig (21):	Relationship of different levels of fetuin A with atherosclerosis	46
Fig (22):	Fetuin A deficiency in ESRD.	48
Fig (23):	Fetuin A increases Insulin resistance and atherosclerosis.	52
Fig (24):	Role of Fetuin A in inhibition of vascular calcification	54
Fig (25):	Typical protocol for the diagnosis of peripheral arterial disease in patients with diabetes.	65
Fig (26):	Serum Fetuin A level in the control, DM, or DM with diabetic foot group	82
Fig (27):	Type of foot lesions in the DM with diabetic foot group.	82
Fig (28):	Scatter plot for the correlation between age and serum fetuin A level. Fitted line represents local regression smoothing (LOESS) trend line.	86

Fig. No.		Page
Fig (29):	Scatter plot for the correlation between serum fetuin A level and SBP. Fitted line represents local regression smoothing (LOESS) trend line.	87
Fig (30):	Scatter plot for the correlation between serum fetuin A level and DBP. Fitted line represents local regression smoothing (LOESS) trend line.	87
Fig (31):	Scatter plot for the correlation between serum fetuin A level and MAP. Fitted line represents local regression smoothing (LOESS) trend line.	88
Fig (32):	Scatter plot for the correlation between HbA1c level and serum fetuin A level. Fitted line represents local regression smoothing (LOESS) trend line.	88
Fig (33):	Scatter plot for the correlation between serum fetuin A and TAG levels. Fitted line represents local regression smoothing (LOESS) trend line**.**	89
Fig (34):	Scatter plot for the correlation between serum fetuin A and HDL levels. Fitted line represents local regression smoothing (LOESS) trend line.	89
Fig (35):	Scatter plot for the correlation between the duration of DM and serum fetuin A level. Fitted line represents local regression smoothing (LOESS) trend line.	90

INTRODUCTION

Serum fetuin-A is a multifunctional glycoprotein, which is exclusively secreted from hepatocytes in humans **(Denecke et al., 2003).**

An association between insulin resistance and type 2 diabetes in individuals with high serum fetuin-A levels was reported **(Stefan et al., 2008).**

Fetuin-A is an independent risk factor for developing diabetes **(Eraso et al., 2010).** Additionally, recent studies have emphasized that there may be an association between fetuin-A levels and peripheral arterial disease (PAD) **(Lorant et al., 2011).**

Diabetes mellitus (DM) is a common metabolic disorder .The most common form of diabetes is type 2 diabetes. These metabolic abnormalities lead to long-term damage of various organs, causing their dysfunction and failure. Diabetes-related micro-vascular complications are responsible for the majority of new cases of blindness, kidney failure **(American Diabetes Association, 2013).**

Diabetic foot is one of the major complications of diabetes and is the main reason for nontraumatic major

amputations **(ADA, 2013)**. The common clinical features of diabetic foot include ulcers, foot deformity, infection, neuropathy, PAD, osteomyelitis, and gangrene **(Wagner, 1981).**

The risk of lower-extremity amputation is higher in patients with diabetes and PAD than in those without diabetes **(Jude et al., 2001).**

The role of fetuin-A and its involvement in patients with type 2diabetes and PAD, who commonly suffer from advanced/systemic atherosclerosis, seems to be very complex and has not been fully understood as yet **(Kallio et al., 2003).**

Aim of the study

The aim of this study is to investigate the possible relationship between serum fetuin-A levels and the development of diabetic foot.