EFFECT OF T2DM ON INDUCING CHANGES IN VISFATIN LEVEL AND DETERIORATION IN CARDIAC FUNCTION

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Abbreviations

ADA	American diabetes association
ADMA	Asymmetric dimethylarginine
AGEs	Advanced glycation end products
AVP	Arginine vasopressin
BMI	Body mass index
CAD	Coronary artery disease
CAN	Cardiac autonomic neuropathy
CD	Cluster of differentiation
CETP	Cholesterol ester transfer protein
CHD	Coronary heart disease
CVD	Cardio vascular diseases
DAN	Diabetic autonomic neuropathy
DDAH	Dimethylarginine dimethylaminohydrolase
DK A	Diabetic ketoacidosis
DM	Diabetes melitus
DSPN	Distal symmetric polyneuropathy
EASD	European Association for the Study of

	diabetes
eNOS	Endothelial nitric oxide synthase
ERK	Extracellular signal-regulated kinase
FGF	Fibroblast growth factor
GADA	Glutamic acid decarboxylase autoantibodies
GDM	Gestational diabetes mellitus
HAAF	Hypoglycemia-associated autonomic failure
HBA1c	Glycated hemoglobin levels
HF	Heart failure
HIF	Hypoxia-inducible factor
HNF1B	Hepatocyte nuclear factor 1 homeobox B
HNS	Hyperosmolar nonketotic state
HSL	Hormone-sensitive lipase
HUVEC	Human umbilical vein endothelial cell cultures
IA2	Insulinoma-associated2
ICA	Islet cell autoantibodies
IDF	International Diabetes Federation

IGF1	Insulin growth factor-1
IL	Interleukin
iNOS	Inducible nitric oxide synthase
LPL	Lipoprotein lipase
MAPK	Mitogen-activated protein kinases
MCP	Monocyte chemottractant protein
MHC	Major histocompatibility complex
MODY	Maturity onset diabetes of the young
MMP	Matrix metalloproteinases
mPTP	Mitochondrial permeability transition pore
NAD	Nicotinamide adenine dinucleotide
Nampt	Nicotinamide phosphoribosyltransferase
NF	Nuclear factor
NIDDM	Noninsulin-dependent diabetes mellitus
NMN	Nicotinamide mononucleotide
NO	Nitric oxide
NPDR	Non proliferative diabetic retinopathy
PAI-1	Plasminogen activator inhibitor 1
PARP	Poly(ADP ribose) polymerase
PBEF	Pre-B-cell colony-enhancing factor

PI3K	Phosphatidylinositol 3-kinase
PKC	Protein kinase c
ROS	Reactive oxygen species
SCF	Stem cell factor
STAT	Signal transducer and activator of transcription
SA-HRP	Streptavidin-horseradish peroxidase
TCF7L2	Transcription factor7 like 2
T2D	Type 2 diabetes
TIMP	Tissue inhibitors of MMP
TNF α	Tumor necrosis factor α
VEGF	Vascular endothelial cell growth factor
VSMC	Vascular smooth muscle cell
ZnT8	Zinc transporter8

Abstract

Background: Diabetes melitus is one of the most nutritional disordes associated with cardiovascular diseases . Visfatin is a new adipocytokine which is largely secreted by visceral adipose tissue and its effects in the development of diabetes and inflammatory reactions are similar to insulin. It acts synergistically with insulin in increasing glucose uptake, stimulating glucose transfer to the muscle and adipose tissue.

Methods:Glucose ,lipid profiles, visfatin ,ejection fraction were measured for 31 diabetics and 20 healthy people using usual biochemical methods , echocardiography for ejection fraction and sphygmomanometer for measurement of arterial blood pressure .

Results: The mean of body mass index,visfatin, total cholesterol, triacylglycerols, LDL-C and the fasting blood sugar levels,arterial blood pressure were highly significant in the diabetics as compared to those in the controls,whilethe mean HDL-C concentration and ejection fraction were significantly lower in diabetics than in controls.

Conclusion: High TC,TG,LDL,arterial blood pressure and decrease EF consider as an indicator that DM is properly associated with dyslipidemia and has high risk incidence of cardiovascular diseases, while high visfatin level in diabetics may give an idea about the role of visfatin in pathogenesis of DM.

Key words:Diabetes melitus,visfatin,lipid profiles,ejection fraction.