

Dedication

To my Parents

Who gave me Light

To my Teachers

Who taught me wrong from Right

To my brother, sisters,

Friends and Loved Ones

With me or out Of Sight

To Those Who Have,

And Always Will,

Stand Beside me

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Abstract

This is a cross- sectional study compared the serum levels of total cholesterol, triglycerides, HDL-cholesterol and LDL-cholesterol of 50 Sudanese patients suffering from type 2 diabetes mellitus associated with hypertension as a test group and 30 apparently healthy volunteers as control group (A) and 30 diabetic normotensive patients as control group (B) . Participants in this study were from Khartoum state. Age and gender were matched for the test group with the two control groups. The serum levels of lipids profile were determined

The means of serum levels of total cholesterol, triglycerides and LDL-cholesterol were significantly increased in the test group compared to the control group A ($P\text{-Value} < 0.05$), whereas they showed no significant difference when compared to control group B ($P\text{-Value} > 0.05$).

The means of serum levels of HDL-cholesterol showed insignificant differences, when the test group was compared to control group A and control group B ($P\text{-Value} > 0.05$).

In the test group serum total cholesterol, triglycerides and LDL cholesterol showed insignificant very weak positive correlation, while HDL cholesterol showed a significant weak positive correlation with the duration of hypertension associated with diabetes mellitus.

From the results of the present study it is concluded that; there is no significant difference in serum lipid profile between diabetic-hypertensive and diabetic –non-hypertensive patients.

مستخلص الدراسة

اجريت هذه الدراسة المقطعية لمقارنة مستويات الدهون المختلفة في مصل الدم (الكوليسترول، ثلاثي الجليسريد، البروتينات الشحمية ذات الكثافة العالية وكذلك ذات الكثافة المنخفضة) عند 50 من المرضى السودانيين المصابين بداء السكري من النوع الثاني المترافق مع ارتفاع ضغط الدم مع 30 من المتطوعين الاصحاء كمجموعة ضابطة اولى و 30 من المرضى المصابين بداء السكري ذوي ضغط دم طبيعي كمجموعة ضابطة ثانية. كل المشاركين تم اختيارهم من ولاية الخرطوم.

كان هناك ارتفاع ذو دلالة معنوية في كل المستويات الوسطى للكوليسترول، ثلاثي الجليسريد والبروتينات الشحمية ذات الكثافة المنخفضة وذلك عند مقارنة المستويات الوسطى لمجموعة الدراسة بمستويات المجموعة الضابطة الاولى، حيث كان الاحتمال الاحصائي للمقارنة اقل من 0.05. بينما كان هناك ارتفاع ذو دلالة غير معنوية في المستويات الوسطى لهذه الدهون عند مقارنة مجموعة الدراسة بالمجموعة الضابطة الثانية، حيث كان الاحتمال الاحصائي للمقارنة اعلى من 0.05

وقد اظهرت المستويات الوسطى للبروتينات الشحمية ذات الكثافة العالية فرقا ذو دلالة غير معنوية عند مقارنة مجموعة الدراسة بالمجموعتين الضابنتين.

عند مقارنة مستويات الدهون المختلفة في مجموعة الدراسة مع مدة الاصابة بارتفاع ضغط الدم المترافق مع الاصابة بمرض السكري، اظهر الكوليسترول، ثلاثي الجليسريد والبروتينات الشحمية ذات الكثافة المنخفضة علاقة ايجابية ضعيفة جدا ذات دلالة غير معنوية في حين ان مستويات البروتينات الشحمية ذات الكثافة العالية اظهرت ارتباطا ايجابيا ضعيفا وذو دلالة معنوية.

وعليه تخلص نتائج هذه الدراسة الى عدم وجود فروقات معنوية في مصل الدم للدهون بين المرضى المصابين بداء السكري من النوع الثاني المترافق مع ارتفاع ضغط الدم والمرضى بذات الداء ذوي ضغط الدم الطبيعي.

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Abbreviations

ADA	American Diabetic Association
ADH	Anti diuretic hormone
ATP	Adenosine tri-phosphate
BMI	Body mass index
CHD	Coronary heart disease
CVD	Cardiovascular disease
DKA	Diabetic ketoacidosis
ECG	Electrocardiograph
ESRD	End stage renal disease
FPG	Fasting plasma glucose
GAD	Glutamic acid decarboxylase antibodies
GDM	Gestational diabetes mellitus
HDL	High density lipoproteins
IDL	Intermediate density lipoproteins
IDDM	Insulin dependent diabetes mellitus
IFG	Impaired fasting glucose
IGT	Impaired glucose tolerance
LDL	Low density lipoproteins
MRDM	Malnutrition related diabetes mellitus
NIDDM	Non insulin dependent diabetes mellitus

OGTT	Oral glucose tolerance test
RPG	Random plasma glucose
SPSS	Statistical package for social science
VLDL	Very low density lipoproteins

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