

الآية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا ۗ إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ

صدق الله العظيم

سورة البقرة الآية 32

Dedication

- To my parents....
- To my teachers....
- To my colleagues...
- To everyone who helped me to complete this research.

Acknowledgment

First of all thanks for Allah, giving me the power and willingness to complete this research.

After that I would like to thanks my supervisor **Dr.Mohieldein Abbas Abdalla** for his support and instructions that helped me to finish this work.

Special thanks to my colleagues who helped me in this work.

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Abstract

This is descriptive analytical study carried out in Khartoum state in Turkish hospital, and laboratory administration, in the period from (March 2011 to August 2011) to evaluate some coagulation tests among Sudanese Hypertensive patients in Khartoum State. Hundred diagnosed hypertensive patients were selected 42(42%) male and 58(58%) female and fifty healthy individuals were selected as control group. 4.5ml of venous blood was with drawn from each patient, placed in tri sodium citrate container, then centrifuge to get platelets poor plasma (ppp) and that is to assess PT, APTT, fibrinogen and D-dimer. The results were analyzed by use SPSS version11.5, and express as means. The results obtained from patients that the means of PT(Prothrombin time), APTT (Activated partial thromboplastin time), fibrinogen and D-dimer in patients group. The mean of PT, APTT, fibrinogen and D-dimer in control group, (13 sec), (30.6 sec), (221 mg/dL) and (0.14 mg/L) respectively. The results showed no significant differences between the mean of patients and controls in the Prothrombin time (PT) (p value >0.005) and Activated Partial Thromboplastin Time (APTT) in both sex (p value >0.005) while results demonstrated a significant differences between the mean of patients and controls in Fibrinogen level and D-dimer in both sex (p value <0.005).

The results obtained indicated that measurement of Prothrombin time (PT) and Activated partial thromboplastin (APTT) were unnecessary when evaluating hypertensive patients whom there was clinical evidence of hemostatic abnormality. The results of this study raised the possibility of that fibrinogen level and D-dimer could be use in identifying risk group of hypertensive patients who were likely to develop thrombotic events.

ملخص البحث

هذه دراسته وصفية تحليلية أجريت في ولاية الخرطوم في المستشفى التركي في الفترة من مارس 2011 إلى يونيو 2011 لتحديد تأثير ارتفاع ضغط الدم على بعض معاملات تخثر الدم . تم اختيار مائة شخص مشخصين كمرضى ضغط منهم اثنان واربعون من الذكور وثمانية وخمسون من الاناث كما تم اخذ خمسون عينة من الإصحاء كمجموعه ضبط . تم أخذ 4.5 مليلتر من الدم الوردي من كل مريض وتم وضعه في حاويه تحتوى على مانع تجلط ثلاثي سترات الصوديوم واستخلص المصل الدموي لقياس زمن البروثرومبين , زمن الثرومبولاستين الجزئى المنشط و دي دايمر وتم تحليل النتائج بواسطة برنامج الحزم الإحصائية للعلوم الإجتماعيه إصداره 11.5, تم حساب المتوسط وكانت النتائج كالآتي: متوسط زمن البروثرومبين (14 ثانيه), متوسط الثرومبولاستين الجزئى المنشط (30.8 ثانيه), متوسط تركيز الفبرينوجين كانت (249 ملجرام/ديسلتر) ومتوسط تركيز الـدي-دايمر (0.4 ملجرام/لتر) وهذا بالنسبة للمرضى, بينما كانت متوسط البروثرومبين, متوسط الثرومبولاستين الجزئى المنشط في مجموعة الضبط (13.5 ثانيه), (30.6 ثانيه) و متوسط تركيز الفبرينوجين و الـدي-دايمر كانت (221 ملجرام/ديسلتر) (0.14 ملجرام/لتر) على التوالي. أظهرت النتائج عدم وجود فروقات ذات دلالة معنوية بين المرضى والمعادلين الطبيعيين فى متوسط البروثرومبين (القيمة المعنوية اكبر من 0.05) وزمن الثرومبولاستين المنشط جزئى كما لا توجد فروقات بين الجنسين (القيمة المعنوية اكبر من 0.05), بينما أظهرت وجود فروقات ذات دلالة احصائية فى متوسط الفبرينوجين (القيمة المعنوية اقل من 0.05) والدى دايمر (القيمة المعنوية اقل من 0.05) مقارنة بعينات المعادلين الطبيعيين وايضا لم تظهر فروقات بين الجنسين (القيمة المعنوية اكبر من 0.05).

اشارت المحصلة على ان قياس زمن البروثرومبين وزمن الثرومبولاستين المنشط جزئيا غير ضرورية عند تقييم مرضى ارتفاع ضغط الدم عندما لا يوجد اى دليل سريرى يشير الى وجود خلل فى عملية التجلط, كما أظهرت النتائج ان مستوى الفبرينوجين والدى-دايمر يمكن ان يكون مفيد فى تحديد مجموعة من مرضى ارتفاع ضغط الدم الذين يحتمل تعرضهم لمخاطر التجلط.

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List of Abbreviations

ACE	Antigen Converting Enzyme inhibitor
ADP	Adenosine diphosphate
APC	Activated protein C
APTT	Activated Partial Thromboplastin Time
ARB	Angiotensin receptor blockers
BP	Blood Pressure
BUN	Blood Urea Nitrogen
Ca	Calcium
cAMP	Cyclic adenosine monophosphate
DASH	Dietary Approaches to Stop Hypertension
DIC	Disseminated intravascular coagulation
dRVVT	dilute Russell's viper venom time
DVT	Deep venous thrombosis
ECG	Electrocardiogram
EHT	Essential hypertension
ELT	Euglobulin lysis time
FDPs	Fibrin Degradation Productes
Fgn	Fibrinogen
Fn	Fibrin
HMWK	High-molecular-weight kininogen
HTN	Hypertension
IIa-TM	Thrombin-thrombomodulin
INR	International Normalizes Ratio
LVH	Left Ventricular Hypertrophy
PAF	platelet-activating factor
PAI 1	plasminogen activator inhibitor-2
PAI 2	plasminogen activator inhibitor-2
PE	pulmonary embolism
PGI2	Prostacyclin
Pn	Plasmin
PNH	paroxysmal nocturnal hemoglobinuria
PT	Prothrombin time
TCT	Thrombin clotting time.
TEM	Thromboelastometry
TF	Tissue factor
TFPI	Tissue factor pathway inhibitor
TOD	Tissue organ damage
t-PA	Tissue Plasminogen activator
TPR	Total peripheral resistance
TXA2	Thromboxane A2
vWF	von Willebrand factor
WCHT	White-coat hypertension