

الآية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال الله تعالى

إِنَّ اللَّهَ لَا يَسْتَحْيِي أَنْ يَضْرِبَ مَثَلًا مَا بَعُوضَةٌ فَمَا فَوْقَهَا ۚ فَأَمَّا الَّذِينَ آمَنُوا فَيَعْلَمُونَ أَنَّهُ الْحَقُّ مِنْ رَبِّهِمْ ۚ وَأَمَّا الَّذِينَ كَفَرُوا فَيَقُولُونَ مَاذَا أَرَادَ اللَّهُ بِهَذَا مَثَلًا ۚ يُضِلُّ بِهِ كَثِيرًا وَيَهْدِي بِهِ كَثِيرًا ۚ وَمَا يُضِلُّ بِهِ إِلَّا الْفَاسِقِينَ

صدق الله العظيم

سورة البقرة الآية ٢٦

Dedication

To my country Sudan,

To my father Mohammed,

To my mother Huda,

To my family,

My uncle and aunts

To my dear friend and

To all whom I love

Acknowledgment

Thanks at first and last to (ALLAH) who enabled us to conduct this study.

My special thanks and respect to my supervisor Dr. Sana El tahir for her close supervision, effort, invaluable advices and kind guidance.

We would like to thank all the volunteers who participated in this study and applaud the efforts of those who abstained from smoking

My thanks extend to involve all who stand beside me, encouraged and supported me till this study emerged to light.

Abstract

There is a strong relationship between cigarette smoking and haemostatic parameters to increase the risk of cardiovascular events. This is case control study carried out in Khartoum state from May 2012 to July 2012, aim to measure the prothrombin time, partial thromboplastin time and fibrinogen level among the Sudanese smoker, 100 blood sample were collected randomly from cigarette smoker people with an age ranged between (21-60 years) and duration of smoking ranged between (1- 40 years). The data was classified in to four groups according to age of the smoker and three different groups according to duration of smoking. Fifteen blood samples collected from apparent healthy non smoker individual as control group. 2.5ml of venous blood was drawn from each individual; the results were analyzed by use SPSS version 11.5 and express as mean. Prothrombin Time was significantly lower in cigarette smokers group (mean 11.8 sec) compared with nonsmokers group (mean 13.8sec). The Prothrombin also negatively correlating with the duration of smoking and it's statistically significant, however, the partial thromboplastin Time was not changed significantly in the smokers groups, but correlating with age, and the duration of smoking and it's statistically significant.

Fibrinogen was significantly increased for the cigarette smokers group (4.09g/dl) compared to non-smokers (2g/dl), and correlating with age and with the duration of smoking.

مستخلص البحث

هنالك علاقة مابين التدخين وتوازن الدم فى زيادة مخاطر امراض القلب والشرابيين ،هذه دراسة وصفية تحليلية اجريت فى ولاية الخرطوم فى الفترة ما بين مايو ٢٠١٢م الى يوليو ٢٠١٢م ،وتهدف الى قياس زمن البروثرومبين، و زمن الثرومبوبلاستين الجزئى المنشط والفبرينوجين بإستخدام جهاز زمن التجلط الآلي عند المدخنين وتم اخذ مائة عينة من المدخنين داخل ولاية الخرطوم وتتراوح اعمارهم ما بين (٢١ - ٦٠ سنة) وفترة تدخين ما بين (١- ٤٠ سنة) وقدتم تقسيم المعلومات على اساس الفئة العمرية الى خمسة مجموعات وكذلك الى ثلاثة مجموعات وفقا للفترة الزمنية للتدخين. و للمقارنه تم أخذ خمسون عينة من متبرعين أصحاء غير مدخنين. تم اخذ ٢.٥ملليلتر من الدم الوريدي من كل شخص، وتم تحليل النتائج بواسطة برنامج الحزم الاحصائية وكانت النتائج كالآتى: متوسط زمن البروثرومبين (١١.٨ ثانية) متناقص مقارنة بمتوسط مجموعة الضبط (١٣.٨ ثانية) وظهرت النتائج وجود نقص ذو دلالة احصائية، كما انه يتناسب عكسياً مع فترة التدخين. ومتوسط زمن الثرومبوبلاستين الجزئى المنشط كانت (٣٢.٣ ثانية) بينما مجموعة الضبط كانت (٣٣.٦ ثانية) وظهرت النتائج عدم وجود فروقات ذات دلالة احصائية.ولكنها تتناسب عكسياً مع الفئة العمرية وتتأثر بفترة التدخين .وكذلك متوسط مستوى الفبرينوجين اظهرت(٤.٠٩ جم/دسل)زيادة ذات دلالة احصائية مقارنة بمجموعة الضبط (٢ جم/دسل)، كما أنه يتناسب طرديا مع فترة التدخين والفئة العمرية .

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LIST OF ABBREVIATION

Abbreviation	Item
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ADP	Adenosine diphosphate
APTT	Activated partial thromboplastin
APC	Activated protein C
CAMP	Cyclic adenosine monophosphate
CVD	Cardiovascular disease
CHD	Coronary heart disease
DIC	Disseminated intravascular disease
ECs	Endothelium cell
EDRF	Endothelium derived relaxing factor
FDPs	Fibrin degradation product
FSP	Fibrin split product
GPIa	Glycoprotein Ia
GPIb	Glycoprotein Ib
GPIIa	Glycoprotein IIa
GPIIb	Glycoprotein IIb
GPIIIa	Glycoprotein IIIa
HMWK	High molecular weight kininogen
LPA	Lipoprotein
MG	Macroglobulin
OCs	Open canalicular system
PAF	Platelet activated factor
PIA ₂	Phospholipase A ₂
PGI ₂	Prostaglandin I ₂
PT	Prothrombin time
PVD	Peripheral vascular disease
SK	Streptokinase
TF	Tissue factor
TFPII	Tissue factor pathway inhibitor
TXA ₂	Thromboxane A ₂
TPA	Tissue plasminogen activator
U-PA	Urokinase
VwF	Von Willebrand factor
Vkorc	Vitamin K peroxidase reductase