الآيـة

قال تعالى:

(وَقَضَى رَبُّكَ أَلَّا تَعْبُدُوا إِلَّا إِيَّاهُ وَبِالْوَالِدَيْنِ إِحْسَانًا إِمَّا يَبْلُغَنَّ عِنْدَكَ الْكِبَرَ أَحَدُهُمَا أَوْ كِلَاهُمَا فَلَا تَقُلْ لَهُمَا أُفٍّ وَلَا تَنْهَرْهُمَا وَقُلْ لَهُمَا قَوْلًا كَرِيمًا (23)وَاخْفِضْ لَهُمَا جَنَاحَ الذُّلِّ مِنَ الرَّحْمَةِ وَقُلْ رَبِّ ارْحَمْهُمَا كَمَا رَبَّيَانِي صَغِيرًا (24))

سورة الإسراء الآيات (23-24)

Dedication

We dedicate this research study to all of our teachers who teach us any letter in any steps in our learning levels, to our family who help and stand with us to collect our samples, to our friends and college, to our faculty members in the Hematology laboratory, to everyone who wish the best for us.

Acknowledgment

Thanks at first and last for the light of our life our God Allah who gave us the strength and good health while doing this project and guided us through the way in this life and for Prophet Mohammed the prayer and peace from Allah to him. Then we would like to express our special thanksforour family, friends and for Ustaz Abuzar Ahmed Ibrahim for this great efforts of supervising and leading us through this project, for all person who trust with us and allowed us to take the sample and complete the study. Finally to every person gave us something to light our pathway, we thank them for believing in us and who gave our study the importance that deserved.

Abstract

This is analytical cross sectional studyconductedin Khartoum state during the period from December 2013 to January 2014 to evaluate the effect of cigarette smoking on platelet count and indices on Sudanesemales.

One hundred (100) samples were collected fromsmokersand seventy (70) samples were collected from non-smokers as control, all participants were informed about the study and informed consent for participationwas obtained. The age of smokers between seventeen (17) and fifty five (55) years and consume from five to sixty cigarette per day for at least one year, and not suffer from bleeding, diabetes mellitus or hypertension.

2.5 ml of venous blood samples were collected in ethylene diamine tetra acetic acid (EDTA) containers. Theplatelet count and indices were investigated using hematological analyzer (sysmex KX-21N) and statistical package for socialscience (SPSS) computer program version 11.5 was used for data analysis.

The mean platelet count was significantly decreased in smokers when compared with non-smokers (P value=0.000)and this lowering in platelet count was not related to the number of cigarette per day or the duration of smoking.

There were no significant differences in mean platelet volume, platelet distribution width and platelet large cell ratio between smokers and non-smokers, P value (0.219), (0.178) and (0.296) respectively.

The peripheral blood smear was examined to determine the size, morphology and aggregation of platelet and there was no appearanceof giantplatelet,aggregation or abnormal morphology of platelet.

الخلاصة

هذه دراسة تحليلية مقارنيه اجريت في ولاية الخرطوم في الفترة من ديسمبر 2013 الى يناير 2014 لتوضيح تأثيرتدخين السجائرعلى تعداد الصفائح الدموية ومؤشرات احجامها على الذكور السودانيين.

مائة عينة دم جمعت من المدخنين و سبعينعينة من غيرالمدخنين, جميع المشاركين تم تنويرهم بأهداف البحث واخذت موافقتهم. المدخنين كانت أعمارهم تتراوح بين سبعة عشر وخمسة وخمسين سنة ويستهلكون من خمسة الى ستين سيجارة في اليوم لمدة سنة واحدةعلى الأقل ولا يعانون من النزيف, مرض السكري اوالضغط.

جمعت 2.5 ملم عينة دم من الوريد في حاوية تحتوى مانع التجلط EDTA . تم اجراءمجموع تعدادالصفائح الدموية ومؤشرات احجامهاباستعمال الجهاز Sysmex KX-21 وتم تحليل البيانات المتحصل عليهابواسطة برنامجالحزم الاحصائية للعلوم الاجتماعية نسخة رقم 11.5.

النتائج المتحصل عليها لدى المدخنين وبمقارنتها مع العينة الضابطة أظهرت ان هناك نقص ذو دلالة إحصائية في متوسط تعداد الصفائح الدموية, قيمة P الجدولية (٠,٠٠٠.) وان هذا النقص ليس له علاقة بعدد السجائر في اليوم او فترة التدخين.

لا توجد فروقات ذات دلالة احصائية في متوسط حجم الصفائح الدموية,توزيع الصفائح الدموية وحجم الصفائح الدموية الكبيرة, قيمة P الجدولية(٠,٢١٩) (٠,١٧٨,)(٠ ,٢٩٦)على التوالي.

مسحة الدم الطرفي فحصت لمعرفة وجود حجم, شكل أو حدوث تجمعاتللصفائح الدمويةولا يوجد صفائح دموية كبيرة او تجمعات للصفائح الدموية ولم يكن هناك صفائح دموية كبيرة, تجمعات او اشكال غير طبيعية للصفائح الدموية.

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Abbreviations

5-HT	5-Hydroxytryptamine
ADP	Adenosine Diphosphate
ATP	Adenosine Triphosphate
BSS	Bernard Soiular Syndrome
CFU	Colony FactorUnit
CFU	Colony Forming unit
CLL	ChronicLymphocytic Leukemia
CO	Carbon Monoxide
CSF	Colony Stimulating Factor
DIC	Disseminated Intravascular Coagulopathy
DNA	Deoxyribonucleic Acid
DTS	Dense Tubular System
ECM	Extracellular Matrix
EDTA	Ethylene Diaminetetra Acetic Acid
EM	Extracellular Matrix
FFP	Fresh Frozen Plasma
fl	Fimtoliter
GM-CFU	Granulocyte Macrophage –Colony Forming Unit
GP	Glycoprotein
HCT	Hematocrit

HIV	Human Immunodeficiency Virus
HLA	Human Leukocyte Antigen
HPA-1a	Human Plateletantigen-1a
IL-3	Interleukin-3
IL-6	Interleukin-6
ITP	Idiopathic Thrombocytopenic Purpura
MCH	Mean Cell Hemoglobin
MCHC	Mean Cell Hemoglobin Concentration
MCV	Mean Cell Volume
Meg-CSF	Megakaryocyte-CSF
MK1	Megakaryoblast
MK2	Promegakaryocyte
MK3	Basophilic Megakaryocyte
MK4	Megakaryocyte
MPV	Mean Platelet Volume
N=C	Nuclear Cytoplasm Ratio
OCS	Open Canalicular System
PCT	Plateletcrit
PDGF	Platelet Derived Growth Factor
PDW	Platelet Distribution Width
PF4	Platelet Factor 4
PG	Prostaglandin

PGI2	Prostacyclin
P-LCR	Platelet-Large Cell Ratio
PLT	Platelet
RBC	Red Blood Cell
SCCS	Surface Connected Canalicular System
SLE	Systemic Lupus Erythematous
SPSS	Statistic Package For Social Science
TPO	Thromopoietin
TTP	Thrombotic Thrombocytopenic Purpura
TXA2	Thromboxane A2
vWF	Von WillebrandFactor
β TG	BetaThromboglobulin
δ-SPD	Delta Storage Pool Disease