بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال الله تعالى

نَرْفَعُ دَرَجاتٍ مَنْ نَشاءُ وَفَوْقَ كُلِّ ذِي عِلْمٍ عَلِيمٌ

صدق الله العظيم

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Dedication

Firstly 1 dedicated this study to the bright light that started from Makkah to cover all over the world, the prophet Mohammed the prayers and peace from Allah to him.

To may parents …….

Supervisor……

Teachers ……..

Friends …. ……. ……

Family and……

Anyone one help me to complete this research.

Acknowledgements

I would like to express may appreciation to may supervisor **Dr.Abdalla Abdalkarim** for his guidance and support during the conduction of this study, his keen supervision, valuable advice, and continuous encouragement to make this research possible. Many thanks also extended to the teachers. Best regards and thanks to the contribution of the staff of hematology department may colleagues and friends, for their participation in this study and may appreciations to all those who helped me to realize the importance of this research.

ملخص الدراسة

هذه دراسة وصفية تحليلية اجريت فى الفترة من اغسطس 2013 الى نوفمبر 2013 لتحديد أثر تدخين السجائر فى بعض مكونات الدم المختلفة فى فئة الرجال بولاية شمال دار فور.

عدد الافراد المشتركين فى هذه الدراسة مائة فرد . ثمانون فرد من المدخنين للسجائر و عشرون فرد غير مدخنين بمثابة ضابط للتحليل الاحصائى. تم تجميع عينات الدم بعد ملء استبيان الدراسة تم قياسه بواسطة جهاز (Sysmex KX2-1N) و هو عد الدم الكامل و ال قيم المطلقة لكرات الدم الحمراء جهاز تحليل ذاتى كامل للدم . و ايضا تم فحص مسحة الدم الطرافى لمعرفة شكل الخلايا.

نتائج هذا البحث اظهرت ان المدخنين للسجائر ذات دلالة زائدة فى مستوى عدد كرات الدم الحمراء (R.B.Cs) (P<0.00) والهيمو قلوبين (Hb) (P<0.00) وكتلة حجم الخلايا (PCV) (P<0.00) و ايضا المتوسط لمتوسط حجم كرة الدم الحمراء (MCV) (P<0.00) و عدد كرات الدم البيضاء (WBCs) (P<0.02) و متوسط (MCHC) و اما المتوسط لمتوسط تركيز الهيمو قلوبين فى الخلية (MCH) اظهر دلالة تنا قصية فى المدخنين مقارنة مع غير المدخنين و هذه الهيمو قلوبين فى الخلية الدراسة توافقت مع الدراسات التى اجريت فى تركيا و اليابان.

Abstract

This descriptive and analytic study which was conducted in period between August 2013 and November 2013 to assessment the effect of cigarette smoking on haematological values in male population of North Darfour state. The subjects participated in this study were eighty male cigarette smokers compared with twenty non-smokers as control.

The blood samples were collected after study questionnaire were filled, full blood count was measured by Sysmex KX2-1N fully automatic haematological analyzer, also peripheral blood smear was examined to show the morphology of the cells.

The results were showed that the smokers had significant higher level of red blood cell count ($P<0.00$), haemoglobin ($P<0.00$), packed cell volume ($P<0.00$), white blood cell count($P<0.02$) and the mean of MCV ($P<0.00$). The mean MCHC and mean of MCH was significantly decrease on smokers rather than non-smokers. This result agreed with others result done in Turkish and Japan.

Abbreviations:

CO: Carbon monoxide.

CO2: Carbon dioxide.

EDTA: Ethylene diamine tetra-acetic acid.

Hb: hemoglobin.

HbCO: Carboxyhemoglobin.

HbHi: Methemoglobin.

HbS: Sulfhemoglobin.

HCT: Hematocrite.

Mg: Milligram.

N.K: Natural killer cells.

PCV: Packed cell volume.

Plt: Platelets.

RBCs: Red blood cells.

WBCs: White blood cells.

nm: Nanometer.

MCV: Mean cell volume.

MCH: Mean cell hemoglobin.

MCHC: Mean cell hemoglobin concentration.

Fl: Femtoleter.

Pg: Pico-gram.

TLC: Total leukocyte count.

TWBC: Total white blood cells count.

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