بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال الله تعالى

قُلْ إِنَّ صَلَاتِي وَنُسُكِي وَمَحْيَايَ وَمَمَاتِي لِلَّهِ رَبِّ الْعَالَمِينَ (162

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DEDICATION

To my beloved & pleased parents whom are every things for me.

To my family members whom their encouragement

Push me up & up.

To my teachers, very special friends & colleagues

Who were integral parts of support group.

I dedicate this work

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The greatest thank to Allah then I would like to thank every one who helps me throughout this work at any step of it.

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Finally thanks extend to all people whom the blood samples had been collected from.

Abstract

This study was conducted in Khartoum State during the period from April to October 2013; its community based case control study.

Objectives of **the study**: the main aim of the study is to assess the thyroid hormones among Sudanese smokers in Khartoum State .

Materials and methods : Eighty plasma samples were collected from healthy heavy Sudanese smokers at different ages . In addition to 50 plasma samples from healthy non smokers at different ages for comparison, of thyroid stimulating hormone (TSH) , thyroxine (T4) and tri-iodothyronine (T3) . The level of thyroid hormones in the study was estimated by Omega pathozyme method using Enzyme immunoassay.

Results : the study showed significant increase in thyroxine (T4) , tri-iodothyronine (T3) level in healthy heavy smokers when compared with the control group .(146.8 ±39.0 versus 96.7 ± 25.4 ng /ml , 2.36 ± 0.76 versus 1.96 ± 0.59 nml/ml respectively) , ($p \leq 0.05$) , with significant decrease in Thyroid stimulating hormone (TSH)

(1.68 ± 1.11 versus 2.21 ± 0.99 µIU/ml respectively), ($p \leq 0.05$) , The study recorded significant correlation between thyroid hormones and both age and the duration of smoking ($p > 0.05$) .

Conclusion : The study revealed significant increase in thyroxine (T4) , tri-iodothyronine (T3) with significant decrease in thyroid stimulating hormone (TSH) in healthy smokers.

أجريت هذه الدراسة في ولاية الخرطوم خلال الفترة من ابريل الي اكتوبر 2013

□□□ □□□□□: إن الهدف الرئيسي من هذه الدراسة هو قياس هرمونات الغدة الدر قية لدي المدخنين.

□□□□□□ □□□□□□□□ : تم جمع 80 عينة بلازما من الذكور المدخنين من مختلف الاعمار بالاضافة ال 50 عينة من متطوعين غير مدخنين مماثلين لهم في الاعمار كمجموعة مرا قبة لت قدير مس توي هرمونات الغدة الدر قية في الدم . مس توي الهرمونات في الدراسة ت م ت قديره عن طريق الاجسام المضادة وباستخدام م قياس الاليزا.

□□□□□□□: أظهرت الدراسة ارتفاع مستوي (T4) و مستوي (T3) بالم قارنة مع مجموعات المرا قبة (146±39 م قابل 967±255 236±0.76 – ng/ml م قابل 0.59±1.96 nml/ml) على التوالي ($p \leq 0.05$).

أظهرت الدراسة انخفاض في مستوي هرمون (TSH) المحفز للغدة الدر قية (168 ±111 م قابل 221± 99 µIU/ml) علي التوالـي ($p \leq 0.05$).

سجلت الدراسة علا قة ارتباط بين العمر والفترة بعد التدخين ($p \leq .05$).

□□□□□□□ : هذه الدراسة تستنتج ان هناك ارتفاع في مستوي هرمون (T4) و(T3) مع انخفاض ملحوظ في هرمون (TSH).

ABBREVIATIONS

TSH : thyroglobulin stimulating hormones

T3 : Tri-iodothyronine

T4 : Thyroxine

G.D : Graves disease

TPO : Thyroid peroxidase

BMI : Body mass index

TSIS : Thyroid stimulating immunoglobulins

RR : Reactive risk

Tg : Thyroglobulin

CVD : Cardiovascular disease

CHD : Coronary heart disease

ED : Erectile dysfunction

SIDS : Sudden infant death syndrome

TMAB : Thyroid microsomal antibody titer

TGAB : Thyroglobulin antibody titer

TBG : Thyroxine – binding globulin

HPA : Hypothalamic pituitary – adrenal

PTH : Parathyroid hormone

SRIH : Somatotropin releasing – inhibitaryhormone

TRH : Thyroid releasing hormone

NO : Nitric oxide

HDLc : High density lipoprotein cholesterol

LDLc : Low density Lipoprotein cholesterol

PAHs : Polycyclic aromatic hydrocarbons

PAP : Peripheral arterial pressure

ACE : Antigen – converting enzyme

MI : Myocardial infarction

PAD : Preipheral arterial disease

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