

Dedication

***This work is dedicated to my
lovely family:
Father, Mother, Brothers, Sister
and my
Fiancée...
Whom I love and waited in a high
patience to see me reaching this
level of
knowledge...***

Acknowledgments

I would like to extend my thanks to my supervisor Dr. Badr El- Din Hassen El- Abid for his expert supervision, wise guide, generous help and support.

My thanks extended to Dr. Mohammed Salah the Medical Manager in Yastabshiroon Medical Centre, who examined the individuals in this study.

I wish to extend my warmest thanks to the staff of the clinical chemistry department in Yastabshiroon Medical Centre, where I processed and analysed my specimens.

Special thanks are expressed to Ustaz. Ogail Mohammed for helping me with the statistical analysis.

Abstract

A prospective study conducted during the period June 2006 to April 2007, compared serum levels of alpha-1-antitrypsin, serum and salivary calcium of 50 apparently healthy cigarette smokers and 50 apparently healthy individuals (non-smokers) as a comparison group, both controls and cigarette smokers were chosen randomly from the teaching staff, students and employees of the University of Medical Sciences and Technology.

There is a significant increase in the levels of serum and salivary calcium and a significant decrease in the levels of serum α_1 -antitrypsin in cigarette smokers compared to the control ($P < 0.05$).

Mean $\pm$ SD for controls versus cigarette smokers:

(3.56 ± 1.07) versus (11.54 ± 2.26) mg/dl, for salivary calcium.

(9.02 ± 0.50) versus (10.61 ± 0.97) mg/dl, for serum calcium.

(3.20 ± 0.52) versus (2.46 ± 0.76) g/l, for serum α_1 -antitrypsin.

In this study, I concluded that cigarette smoking reduces the levels of serum alpha -1- antitrypsin and there is a negative correlation with both; the number of cigarettes smoked per day, and the duration of smoking in years.

Moreover, cigarette smoking increases the levels of serum and salivary calcium and there is a positive correlation with both; the number of cigarettes smoked per day, and the duration of smoking in years.

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النتائج

أجريت هذه الدراسة التوقعية خلال الفترة من يونيو ٢٠٠٦م حتى أبريل ٢٠٠٧م , حيث تمت مقارنة مستويات الكالسيوم في لعاب ومصل بشرية بالاضافة الي الفا -١- مضاد التريبسين في مصل الدم عند ٥٠ من المدخنين الأصحاء مع ٥٠ من الأصحاء الغير مدخنين (كمجموعة ضبط). تم إختيار الأفراد عشوائيا من أعضاء هيئة التدريس,الطلاب و الموظفين بجامعة العلوم الطبية و التكنولوجيا.

تم إيجاد زيادة ذات دلالة إحصائية بمستوى الكالسيوم في اللعاب و مصل الدم و إنخفاض ذو دلالة إحصائية بمستوى الفا -١- مضاد التريبسين في مصل الدم عند المدخنين مقارنة بمجموعة الضبط. المستوى الوسطي $\pm$ الانحراف المعياري عند المجموعة الضابطة مقارنة بمجموعة المدخنين:

(٣,٥٦ $\pm$ ١,٠٧) في مقابل (١١,٥٤ $\pm$ ٢,٢٦) ملجرام/ ديسيلتر, بالنسبة للكالسيوم في اللعاب. (٩,٠٢ $\pm$ ٠,٥٠) في مقابل (١٠,٦١ $\pm$ ٠,٩٧) ملجرام/ ديسيلتر, بالنسبة لمصل الدم للكالسيوم. (٣,٢٠ $\pm$ ٠,٥٢) في مقابل (٢,٤٦ $\pm$ ٠,٧٦) جرام/ لتر, بالنسبة لمصل الدم لالفا -١- مضاد التريبسين.

من المعلومات المتحصل عليها في هذه الدراسة, أختتم إلى أن التدخين يؤثر بزيادة معدل الكالسيوم في مصل الدم واللعاب. و يؤثر بإنخفاض معدل الفا -١- مضاد التريبسين. وهذا مرتبط بعلاقة وثيقة بعدد السجائر المدخنة في اليوم الواحد وبمدة التدخين بالسنين.

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List of Abbreviations

AAT	Alph-1-antitrysin
PTH	Parathyroid hormone
COPD	Chronic obstructive pulmonary disease
ECF	Extracellular fluid
Pi	proteinase inhibitor
rpm	revolution per minute
mg/dl	milligram per deciliter
g/l	gram per liter
mmol/L	millimol per liter
µl	microliter
R1	reagent (1)
R2	reagent (2)
°c	degree centigrade
r	correlation coefficient

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