

Dedication

To soul of My father

*To someone always look after me and doing everything to
give me the happiness, the sweetest gift in my life,*

My mother

To the someone special in my life and always supporting me,

My brothers

To the flowers sharing me my life and give it the beauty,

My sisters

To My own family

*To My colleagues and My friends for their patience and
encouragement,*

With love and respect

I dedicate my work

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Abstract

Tobacco consumptions affect the oral cavity first, so it is evident that smoking has many negative influences on oral cavity too. In addition, tobacco consumption modifies several biological parameters, including α -amylase. This research work aims to study the activity of serum and salivary α -amylase in habitual adult tobacco consumers, which conducted during February and July 2014 in Khartoum state.

This is a descriptive cross-sectional study, 106 adults men were enrolled in this study (30 smokers, 25 snuffers, 21 both (smokers and snuffers) and 30 tobacco non-consumers). The blood and saliva samples were collected from tobacco consumers and tobacco non-consumers for estimation of α -amylase activity. Serum and salivary α -amylase was measured using kinetic enzymatic method. ANOVA test and independent t-test was used to compare averages according to study group. Linear regression enabled to establish relationships between duration, as well as serum and salivary α -amylase activity.

High percentage of tobacco consumption found among young adult men, increased saliva α -amylase activity showed in smokers followed by both (smokers and snuffers) versus control group (P -value= 0.01, 0.6) respectively and decreased salivary α -amylase activity showed in snuffers versus control group (P -value= 0.1), the serum α -amylase activity increased in tobacco consumers. There is weak positive Correlation between serum and salivary amylase activity in comparison with duration.

The results conclude that, high percentage of tobacco consumption among young adult individuals. The activity of serum and salivary α -amylase is higher in smokers and salivary α -amylase activity is lower in snuffers, which lead to periodontal diseases and pancreatic diseases.

المستخلص

استهلاك التبغ يؤثر علي تجويف الفم اولا , ولذلك فمن الواضح أن التدخين له العديد من التأثيرات السلبية علي تجويف الفم أيضا. بالإضافة الي ذلك , استهلاك التبغ يغير العديد من المعلمات البيولوجية, بما في ذلك انزيم الالفا اميليز. ويهدف هذا العمل البحثي لتقويم نشاط انزيم الالفا اميليز في مصل ولعاب معتادي استهلاك التبغ. الذي أجري خلال الفترة ما بين فبراير ويوليو عام 2014م في ولاية الخرطوم.

البحث عبارة عن دراسة وصفية, تضمن هذا العمل البحثي 106 من البالغين الرجال (30 من مستخدمي السجائر , 25 من مستخدمي التمباك , 21 من مستخدمي السجائر والتمباك معا و30 من غير مستخدمي التبغ). جمعت عينات الدم واللحاح من المستهلكين وغير المستهلكين للتبغ لتقدير نشاط انزيم الالفا اميليز باستخدام الطريقة الانزيمية. تم تحليل النتائج احصائيا لدراسة المتوسطات و لدراسة العلاقة بين فترة استهلاك التبغ ونشاط الالفا اميليز في مصل الدم واللحاح.

اظهرت النتائج نسبة عالية من استهلاك التبغ وسط الشباب, وزيادة نشاط انزيم الالفا اميليز في اللعاب لدي المدخنين يليها المدخنين ومستهلكي التمباك معا مقابل المجموعة الضابطة علي التوالي (0.6, 0.01 = P), وانخفاض نشاط انزيم الالفا اميليز في اللعاب لدي مستهلكي التمباك مقابل المجموعة الضابطة (0.1 = P). اظهرت الدراسة علاقة ايجابية ضعيفة بين زيادة نشاط انزيم الالفا اميليز في الدم واللحاح وفترة استهلاك التبغ.

استنتج من النتائج ان نسبة عالية من استهلاك التبغ بين الشباب. اعلي نشاط لانزيم الالفا اميليز في المصل واللحاح لدي المدخنين و اقل نشاط لانزيم الالفا اميليز في اللعاب لدي مستهلكي التمباك. مما يؤدي الي امراض اللثة وامراض البنكرياس.

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List of abbreviation

AMP	Adenosine Mono Phosphate
AMY	Amylase
CCK	Cholecystokinin
CNP	Chloro-4-Nitrophenol
CNP-G3	Chloro-4-Nitrophenyl malto- triosed
COPD	Chronic Obstruction Pulmonary Disease
DF	Dilution factor
EC	Enzyme Commission
GCF	Gingival Crevicular Fluid
GI	Gastro Intestinal
GSH	Glutathione
IgG	Gama Immunoglobulin
SAIg	Specific Alpha Immunoglobulin
SOD	Superoxide Dismutase
SPSS	Statistical Package of Social Science
TSST	Trier Social Stress Test
WHO	World Health Organization