

# ***Dedication***

**TO ... MY MOTHER**

**TO ... MY FATHER**

**TO ... MY SISTERS & BROTHERS**

**I DEDICATE THIS WORK**

**With my love**

## **Acknowledgement**

I would like at the beginning to thank Allah for helping me to complete this work.

I am indebted to my supervisor Dr. Hussain Gad El Kareem Ahmed, assistant professor -Head department of Histopathology & Cytology- Faculty of Medical Laboratories Sciences University of Khartoum, for his patience and guidance throughout this work.

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## III- المراجع

اجريت هذه الدراسة فى السودان-ولاية الخرطوم،لتقييم اثر استعمال التمباك على خلايا تجويف الفم.وذلك فى الفترة من يونيو الى اغسطس 2007.حيث شملت الدراسة 100 شخص من الذين يتعاطون التمباك كفئة مستهدفة و 100 شخص ممن لا يتعاطون التباكو على الاطلاق كمجموعة ضابطة. وكان متوسط اعمار مجتمع الدراسة 34 سنة.

تم جمع العينات من ثلاثة مواضع مختلفة فى تجويف الفم (طرف اللسان الخارجى، تجويف الخد،والشفة السفلى). وتمت معالجتها وصبغها بطريقة بابنیكولا. اظهرت نتائج الدراسة ان 25(12.5%) من جملة ال 200 شخص بها تغيرات خلوية ، منها (20%) من الذين يتعاطون التمباك و (5%) ممن لا يتعاطون التباكو. نتائج الفئة المستهدفة اظهرت درجات متفاوتة من شدة التغير الخلوي بينما كانت تغيرات المجموعة الضابطة كلها خفيفة.

كما اوضحت الدراسة وجود خلايا التهابية فى 12(12%) من الفئة المستهدفة. اتضح من خلال الدراسة ان التمباك من اكثربالعوامل خطا على خلايا الفم، و اللسان اكثربالمواضع تاثرا مقارنة بتجويف الخد والشفة السفلى. لذك من الافضل ان يخضع متعاطيه لفحص دورى من وقت لآخر.

كما خلصت الدراسة الى ان دراسة الخلايا المتتساقطة سهلة وبسيطة وذات قيمة في تحديد الحالات الالتهابية والتغيرات الخلوية الاخرى، هذا من شأنه ان يساعد في تصميم برنامج تقصي وسط متعاطى التمباك. واوصت باجراء المزيد من الدراسات بصورة اشمل في هذا المجال.

## Abstract

This study was carried out in Sudan (Khartoum state) to assess the effect of toombak use on oral mucosal cytology. The study conducted during the period from (June to August 2007).

The study included 100 of toombak users as exposed, and 100 non tobacco users as non- exposed.

Epithelial atypia was detected in 25 (12.5%) of the 200 studied subjects. Among the 25 subjects, 20 (80%) were toombak dippers while 5(20%) were non tobacco users. While all of the 5(20%) showed mild atypia, the 20(80%) showed different degrees of atypia.

Ventral-lateral tongue was the most affected site when compared to the buccal and lower lip sites.

Inflammatory changes were detected among 12(12%) of toombak users.

Toombak may be regarded as a risk factor for developing oral epithelial atypia. Toombak users should undergo continuous screening programs. Oral exfoliative cytology is a reliable, simple, non- invasive procedure that can be implemented for comprehensive oral screening program.

Further studies covering large population scale is highly recommended.

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## **Abbreviations**

AIDS: Acquired Immune Deficiency Syndrome.

CA: Cytoplasmic area.

CD: Cytoplasmic diameter.

CT: Computed Tomography.

DNA: Deoxyribonucleic acid.

DPX: Distrene Polystyrene Xylene.

EA50: Eosin Azure 50.

EFC: Exfoliative cytology.

ET: Epithelial atypia.

HCL: Hydrochloric Acid.

HIV: Human Immune deficiency Virus.

HPV: Human Papilloma Virus.

HSV: Herpes Simplex Virus.

MRI: Magnetic Resonance Imaging.

NA: Nuclear area.

NAB: Nitrosoanabasine.

NAT: Nitrosoanatabine.

N/C: Nuclear/ Cytoplasmic ratio.

ND: Nuclear diameter.

NNN: Nitrosonoronicotine.

OG6: Orange G6.

OSCC: Oral Squamous Cell Carcinoma.

PAS: Periodic Acid Schiff's.

RNA: Ribonucleic acid.

SCC: Squamous Cell Carcinoma.

ST: Smokeless Tobacco.

TSNA: Tobacco- Specific N.nitrosamine.