

Dedication

To My Mother

To my Father, Sisters and Brothers

To..... My Uncle soul

To..... My Wife

.....

.....

To All Colleagues and Friends

Acknowledgement

First of all, I would like to thank Allah for giving me the power and support to complete this modest work.

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الخلاصة

أجريت هذه الدراسة الوصفية المستقبلية في مدينة الأبيض في الفترة ما بين أبريل الى أغسطس 2009م. الغرض من هذه الدراسة هو تقييم النشاط الخلوي الإستثاري في بطانة الفرد لمستخدمي التبناك عن طريق صبغة بابانيكول وحساب متوسط النقاط النظمية النووية.

تم جمع اللطحات من المكان الذي يوضع فيه التبناك من بطانة الفم ل (100) من مستخدمي التبناك (حالات)، ومثلهم من غير مستخدمي التبناكو كفة ضابطة تتراوح أعمارهم بين (11-70) سنة بمتوسط عمر (26) سنة. متوسط أعمار الحالات (11 ± 27.5) سنة و متوسط أعمار الفئة الضابطة (10 ± 24) سنة.

أظهرت هذه الدراسة أن كل اللطحات التي أخذت من الحالات بها تقرر واضح، بينما هنالك لطخة واحدة من الفئة الضابطة بها تقرر وكان السبب في ذلك تناول الكحول.

من (100) الحالة، 47 (47%) حالة أظهرت تقرر منخفض، بينما الحالات المتبقية 53 (53%) أظهرت تقرر مفرط ($p < 0.0001$). النسبة الأعلى من التقرر المنخفض وجدت في مجموعة مستخدمي التبناك الأقل من 10 سنوات، بينما النسبة الأعلى من التقرر المفرط وجدت في مجموعة مستخدمي التبناك الأكثر من 11 سنة. فيما يختص بالعمر، وجد أنه كلما تقدم العمر كلما زادت نسبة التقرر. في ما يتعلق بالعدوى و الالتهابات، نجد ان الحالات أكثر عرضة من الفئات الضابطة، و السبب في ذلك التقرحات و التهيجات التي يحدثها التبناك في الغشاء البطاني للفم.

في قياس متوسط النقاط النظمية النووية، وجد أن 26 (26%) من الحالات أظهرت متوسط نقاط غير طبيعي. احصائيا وجد أن متوسط النقاط النظمية النووية لغير مستخدمي التبناك (0.41 ± 1.56) أقل مما وجد عند مستخدمي التبناك (

1.6 ± 2.35 (ب < 0.0001). بالإضافة الى ان 20 (10%) و 6 (3%) من اللطخات أظهرت تفرن مفرط ومنخفض على التوالي (ب < 0.03). نتائج هذه الدراسة تدعم أن التمثاك عامل عالي الخطورة في التأثير على الخلايا المخاطية للفم و أن طريقة الخلايا المتساقطة تعطي نتائج ذات قيمة في مسح وتقصي التغيرات الخلوية للفم.

Abstract

This is a descriptive prospective study to identify the cellular proliferative activity by Papanicolaou stain and mean AgNOR counts of the buccal mucosa of toombak users and non-Toombak Users in brush smears. The study was conducted in North Kordofan State – El-Obied during the period from April 2009 to August 2009. The smears were obtained from 200 apparently healthy male individuals, 100 were toombak users (cases) and the remaining hundred were non-tobacco users (controls), their ages ranging from 11 to 70 years with a mean age of 26 years. The mean age for the cases was (27.5 ± 11 years), hence, the mean age for the controls was (24 ± 10 years).

All of the cases were identified with keratinization; hence, only one study subject was identified with keratinization among control group due to alcohol drinking. Out of the 100 cases, 47 (47%) individuals were demonstrated with low keratinization and the remaining 53 (53%) persons were demonstrated with excessive keratinization ($P < 0.0001$). Higher proportions of low keratinization were found in duration range less than 10 years while High frequency of excessive keratinization was detected in duration range more than 11 years. In regard to the age, excessive keratinization is relatively increased with increasing of age.

In regard to the infections and inflammatory conditions, cases were more susceptible than controls, erosions and exposure of oral mucosa to toombak irritation are the major causative factors.

In the measurement of the AgNORs, 26 (26%) of the cases showed abnormal NOR count. Statistically, the mean AgNORs counts for the controls (1.56 ± 0.41) was lower than that for the cases (2.35 ± 1.6) ($P < 0.0001$). However, 20 (10%) and 6 (3%) of the specimens showed excessive and low keratinization respectively ($P < 0.03$).

These findings support that toombak dipping is a high risk factor for oral mucosal proliferative lesions and AgNORs and Papanicolaou tests are used as screening methods for toombak users.

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List of Abbreviations

- .AIDS: Acquired Immune Deficiency Syndrome
- .AgNOR: Arginophilic Nuclear Organizer Region
- .HSV: Herpes Simplex Virus
- .HPV: Human Papilloma Virus
- .HIV: Human Immunodeficiency Virus
- .SCC: Squamous cell Carcinoma
- SEER: Surveillance, Epidemiology and End Results program
- .TSNA: Tobacco Specific N.nitrosamine
- .NNN: Nitrosonoronicotine
- NNK: Tobacco-Specific Nitrosamine 4-(Methylnitrosamino)-1-(3-Pyridyl)-1-Butanone
- .PAH: Polynuclear Aromatic Hydrocarbon
- .EBV: Epstein Barr Virus
- .CMV: CytoMegaloVirus
- .DNA: DeoxyriboNucleic Acid
- CDX: Cancer Detecting System
- .OL: Oral Leukoplakia
- .OC: Oral cancer
- .OLP: Oral Lichen Planus
- .OSCC: Oral Squamous Cell Carcinoma
- .LR: Likelihood Ratio
- .FNA: Fine Needle Aspiration

.FNB: Fine Needle Biopsy

.RNA: RiboNucleic Acid

.EFC: Exfoliative Cytology

.ET: Epithelial Atypia

.OR: Old Ratio

.DPX: Distrene Polystyrene Xylene

.PAS: Periodic Acid Schiff's

.Pap: Papanicolaou

CI: Confidence Interval