

ACKNOWLEDGMENTS

I would like to thank everybody who contributed to the success of this work.

I am deeply indebted to my supervisor Professor Dr. Amel Omer Bakhiet for her guidance, support and help.

Also Thanks are extended to the technical staff of Zen am Hospital for their continuous and valuable assistance.

Deep Thanks are extended to Ustaz AbdAllah HasabEl-nabi for his assistance in cytological investigation. Special Thanks are due to Dr. Hussan Siddig, Head Department of Histopathology, Sudan University of Science and Technology for unlimited help.

Sincere Thanks to Ustaz Abuelgassium Abass for his assistance in statistical analysis.

My Thanks are due to my friends and Teachers at Histopathology Department, Shendi University who had encouraged me during my project.

At last my special appreciations are extended to my family who always supported and encouraged me during the course of this work.

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ABSTRACT

This study was carried out in Khartoum City during a period from January 2011 to May 2011. The present research aimed to analyze the cellular changes in buccal smear in diabetic patients using Papanicolaou (Pap) stain. Seventy samples were taken from patients who attended Zeanam Hospital and Khartoum Education Hospital in Khartoum City. The specimens were processed and examined under the microscope for Pap stain. The majority of study group age ranged from 21 to 44 years included 29 male and 71 female. Patients of type 1 diabetes mellitus were 48.6%. The cytological changes were observed in (11.4%) of them. Type 2 diabetic was detected in (51.4%) cases and 7.1% of them had cellular changes. The duration of diabetes was recorded as 78.6% were more than 10 years and 15.7% of the cases had cellular morphological changes. 21.4% of patients had less than 10 years since started illness. The cytological changes were detected in 2.9% of them. According to HbA1c results; 80% of uncontrolled patients were detected and showed 15.7% cellular changes, 12.9% bacterial infection, 7.1% with fungal infection and viral infection was detected in 2.9%. In controlled patients, cell changes were detected in 2.9%, bacterial infection in 1.4%, fungal infection in 2.9% and viral infection was detected in 1.4%. The study concluded that normal cells were detected in 57% of the cases and cellular changes in 13% of the study group. Other infectious agents were also observed such as *Candida.spp* (the most accounted) and *Actinomyces.spp*.

Also the study concluded that diabetes mellitus causes enlargement in cells, nuclear changes (bi-nucleation, karyorrhexis) and cytoplasmic vacuolations.

الخلاصة

تم إجراء هذه الدراسة في ولاية الخرطوم في الفترة من يناير (2011) إلى مايو (2011). هدف البحث إلى تحليل التغيرات الخلوية والتي تحدث عند مرضى السكري عن طريق أخذ مسحة من تجويف الفم وذلك باستخدام صبغة بابا نيكولاو. تم أخذ سبعون عينة من المرضى الذين حضروا إلى مستشفى زينام ومستشفى الخرطوم التعليمي بمدينة الخرطوم. وتمت معالجة العينات وفحصها تحت المجهر. تراوحت غالبية الفئة العمرية لمجموعة الدراسة بين 21-44 عاما ، (29 من الذكور و71 من الإناث). كان مرضى السكري من النوع الأول 48.6 % وقد لوحظت التغيرات الخلوية في 11.4 % منهم و مرضى السكري من النوع الثاني 51.4 % تم الكشف عن وجود 7.1 % لديهم تغيرات خلوية. وسجلت مدة مرض السكري لأكثر من 10 سنوات في 78.6 % من الحالات و كانت التغيرات المورفولوجية الخلوية 15.7 % . وكان 21.4 % من المرضى أقل من 10 سنوات منذ بداية المرض و تم الكشف عن التغيرات الخلوية في 2.9 % منهم . وفقا للنتائج نسبة HbA1c ، تم الكشف عن 80 % من المرضى غير المنضبط الرقابة للمرض وأظهرت 15.7 % تغيرات خلوية ، 12.9 % عدوى بكتيرية ، 7.1 % عدوى فطرية كما تم الكشف عن 2.9 % عدوى فيروسية. في المرضى المنضبتي الرقابة ، تم الكشف عن التغيرات الخلوية في 2.9 % ، عدوى بكتيرية في 1.4 % ، والعدوى الفطرية في 2.9 % و تم الكشف عن عدوى فيروسية في 1.4 % . ولوحظ أيضا وجود بعض المعديات الأخرى مثل *Candida spp.* و *Actinomyces spp.* وخلصت الدراسة إلى أنه تم الكشف عن الخلايا الطبيعية في 57 % من الحالات والتغيرات الخلوية في 13 % من مجموعة الدراسة. كما وخلصت الدراسة إلى أن مرض السكري يسبب زيادة في حجم الخلية ويؤدي إلى تجزؤ النواة وزيادة الفجوات في السيتوبلازم .