الآية

بسم الله الرحمن الرحيم

قال تعالى:

قُل لَّوْ كَانَ الْبَحْرُ مِدَادًا" لِّكَلِمَاتِ رَبِّي لَنَفِدَ الْبَحْرُ قَبْلَ أَن تَنفَدَ كَلِمَاتُ رَبِّي وَلَوْ جِئْنَا بِمِثْلِهِ مَدَدًا" (109)

صدق الله العظيم

سورة الكهف الآية 109

DEDICATION

TO:
My parents who taught me that the best kind of knowledge to have is that which is learned for its own sake.
To:
My dear sister and my two Brothers.
To:
The memory of my uncle

HALA

Acknowledgment

All my thanks are in the name of Allah, the most Gracious and the .most Merciful

In this instance, I extended my thanks, deep sincere gratitude and honest appreciation to my supervisor **Dr. Mohammed Siddiq** Department of, Histopathology, Sudan University of Science and Technology, for his kindness, good guidance, valuable direction and generous advice that has kept me on the right track.

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their good-natured forbearance with the process and for their pride in this accomplishment. It was a team effort.

Abstract

This study was conducted in industrial areas in Khartoum state during the period from May to October 2011. It was aimed to study the cytomorphological patterns of respiratory and urinary tracts of paint workers.

Sputum and urine samples were collected from 100 paint workers, all of them were male, non-smokers or snuffers or alcoholics, selected randomly as case group, their age ranged from 16 to 77 years with mean age of 31 year. In addition to fifty healthy individuals were selected as control, their age ranged from 16 to 55 years with mean age 35 year.

Sputum and urine samples were prepared and stained with Papanicolaou stain. The study found urine and sputum cytological results of the study group were significant when correlated to control group. In sputum cytological results of the study groups: 46% showed no changes, acute inflammatory cells were observed in 18%, chronic inflammatory cells were observed in 28 % and dyskaryotic cells in 8%. While no cytological changes were showed in control groups.

In urine cytological results of the study groups: 79% showed no cytological changes, acute inflammatory cells were observed in 14%, chronic inflammatory cells were observed in 1% and dyskaryotic cell were observed in 1%. While no cytological changes were showed in control groups.

The study found a significant relation between sputum and urine cytological results with the duration of employment , and no significant relation between sputum and urine cytological results with age, working load of employment, and types of paint.

The study concluded that exposure to paints and its solvents are the risk factors of respiratory and urinary tract atypical cellular changes and the possibility of respiratory and urinary tract infection. The degree of change depends on duration of exposure to the paints and its solvents.

The study recommends that painting workers must wear safety protective clothes such as, mask, coats and eye glass. They also should undergo continuous cytological screening of urine and sputum; also more advanced diagnostic methods should be done to detect cytological changes in their urine and sputum. More studies should be conducted to address this topic as it is a serious problem and for better assessment larger study group must be included. It is also important to design studies with better exposure assessment to identify the underlying carcinogenic agents encountered in painting.

أجريت هذه الدراسة في المناطق الصناعية بولاية الخرطوم في الفترة من مايو حتى أكتوبر 2011.
هدفت الدراسة إلى معرفة النمط الشكلى الخلوى في الجهاز التنفسي والبولي لعمال الطلاء.
تم جمع عينات القشع والبول من 100 عامل بوهية، جميعهم من الذكور غير المدخنين أو مدمنو المشروبات الكحولية أو متعاطو التمبك، تم اختيارهم عشوائيا , تراوحت أعمارهم من 16-77 سنة ومتوسط اعمارهم 31 سنة, إضافة لذلك، تم جمع 50 عينة من أفراد أصحاء كعينات ضابطة, تراوحت أعمارهم من 16-55 سنة ومتوسط اعمارهم 35 سنة.
تم تحضير وصبغ مسحات القشع والبول بصبغة بابانيكولا,وجدت الدراسة ان النتائج الخلوية للقشع والبول فى عينات الدراسة ذات دلالة إحصائية عند مقارنتها مع عينات الفئة الضابطة.
فى نتائج عينات القشع لم يلاحظ وجود تغييرات خلوية فى(46%), تمت ملاحظة الخلايا الالتهابية من النمط الحاد في 18% و الخلايا الالتهابية من النمط المزمن في 28% وتمت ملاحظة خلايا السوئي نووية في (8%) ولم يتم تحديد أي تغييرات في عينات الفئة الضابطة. أما في عينات البول لم يلاحظ وجود تغييرات خلوية فى(79%), تمت ملاحظة الخلايا الالتهابية من النمط الحاد في (14%) و الخلايا الالتهابية من النمط المزمن في (1%) وتمت ملاحظة خلايا السوئي نووية في (1%) ولم يتم تحديد أي تغييرات في عينات الفئة الضابطة.
و قد أظهرت النتائج وجود ارتباط بين التغيرات الخلوية في القشع والبول وفترة العمل ولم نجد ارتباط بينها والعمر وعبء العمل اليومي ونزع البوهية.
خلصت الدراسة إلى أن التعرض للبوهية ومذيباتها من العوامل المسببة للتغيرات السرطانية اللانمطية الخلوية في الرئة, والمثانة و احتمالية الإصابة بالتهابات الجهاز البولي والتنفسي وتعتمد درجة التغيرات الخلوية على مدة التعرض للبوهية ومذيباتها.

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List of abbreviations

Abbreviation	Form

PAP	Papanicolaou
EA50	Eosin Azore 50
OG6	Orange G 6
H & E	Haematoxyline and Eosin
DPX	Disterene Plastiser Xylene
Hcl	Hydrochloric acid
D.W	Distilled water
AML	Angiomyolipoma
XGP	Xanthogranuulomatoous Pyelonephritis
ADPKD	Autosomal Dominant Polycystic Kidney Diease
ESRD	End Stage Renal Disease
TCC	Transitional Cell Carcinoma
GIT	Gastro Intestinal Tract
HNPCC	Hereditary Nonpolyposis Colorectal Cancer
BAL	Bronchoalveolar Lavage
FNAB	Fine Needle Aspiration Biopsy
CT scan	Computed Tomography scan
MRI	Magnetic Resonant Image
FISH	Fluorescent Insitu Hyperdization
VUR	Vesicoureteral
RICK	Radio Isotopes Center of Khartoum
PAHs	Polycyclic Aromatic Hydrocarbons

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