الآيـــــــــــة

بسم الله الرحمن الرحيم

قال تعالى

(وَمَا أُوتِيتُمْ مِنَ الْعِلْمِ إِلا قَلِيلا).

صدق الله العظيم

سورة الإسراء الآية (85) .

Dedications

To my Husband Muamar

TO my daughter Renad.

TO my family.

TO my supervisors

TO my friends.

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First of all I thank my God who gave me the patience and power to complete this thesis.

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Abstract

Human papillomaviruses (HPV) are the principal etiology for cervical cancer. This study aimed to detect mucosal HPVs, HPV16 and HPV18 in cervical cancer in Sudan. The DNA was extracted from sections of paraffin embedded tissues of Sudanese women (n, 63) with cervical squamous cell carcinomas and controls (n, 17). The patients DNA samples (100ng/µl) were amplified by mucosal HPV GP5+/GP6+, HPV16 type specific and HPV18 type specific primers. GP primers detected mucosal HPVs in 75% (n, 47) of the patients, and in none of the controls. HPV16 and HPV18 types were detected in 70% (n, 33) and 9% (n, 4) of the GP positives, respectively. HPV16 was detected from all tumor differentiations degrees specially moderately differentiated tumors, while HPV18 was detected from moderate and well differentiated tumors. HPV16 was detected in all ages but mostly isolated from older patients, while HPV18 was isolated from younger patients. Ten samples were HPV positive but their types were not determined. HPV16 and HPV18 were mostly detected in house wives ethnically from Central Sudan. HPV 16 is the most important determinant for development of cervical cancer in Sudan, with less contribution of HPV18. HPV screening and vaccination programs have to be established in young Sudanese women.

الملخص

فيروسات البابلوما البشرية هى المسبب الرئيس لسرطان عنق الرحم. هدفت هذه الرسالة للكشف عن فيروسات البابلوما البشرية الخاصة بالانسجة المخاطية و الأعضاء التناسلية و تحديدا الأنواع الخطرة 16 و18 فى سرطان عنق الرحم فى السودان. تم إستخلاص دنا من عينات سرطان الخلايا الحرشفية عنق الرحم محفوظة بالفورمالين و الشمع من 63 سودانية مصابة به و 17 للمجموعة الضابطة. تمت مضاعفة و إستنساخ عينات دنا المرضى بتركيز 100 نانوغرام بالميكروليتر بجهاز تفاعل البلمرة السلسلى بالمبتدآت العامة ج ب 5+ وج ب 6+ للكشف عن فيروسات بابلوما الأنسجة المخاطية و المبتدآت الخاصة بالكشف عن الأنواع 16 و 18. كشفت مبتدآت ج ب العامة عن إصابة 75% (ن = 47) من عينات مرضى سرطان عنق الرحم بفيروسات بابلوما الأنسجة المخاطية و عدم إصابة كل المجموعة الضابطة. وجدت فيروسات البابلوما النوعين 16 و 18 فى 70% (ن = 33) و 9% (ن = 4) من العينات الإيجابية لمبتدآت ج ب العامة (ن = 47) بالتتالى. وجدت فيروسات البلوما النوع 16 فى كل درجات تمايز الأورام و خاصة الدرجة متوسطة التمايز, بينما وجدت فيروسات البابلوما النوع 18 فى الأورام متوسطة و جيدة التمايز. وجدت فيروسات البابلوما من النوع 16 فى كل الأعمار و لكن معظمها فى المرضى من كبار السن , فى حين وجدت فيروسات البابلوما من النوع 18 فى المرضى من صغار السن. تم الكشف عن وجود فيروسات بابلوما لم يتم تحديد انواعها فى عشرة عينات. وجدت معظم فيروسات البابلوما الأنواع 16 و 18 فى ربات منازل من أواسط السودان. خلصت الدراسة الى أن فيروس البابلوما البشرى النوع 16 هو المسبب الرئيس لسرطان عنق الرحم و بدرجة اقل فيروس البابلوما البشرى النوع 18 . توصى الدراسة بإجراء مسح صحى للكشف عن فيروسات البابلوما بالنساء و تطعيم الصغيرات.

Table of contents

Subject Page No.

الاية..... i

Dedication.....ii

Acknowledgments.....iii

English Abstract iv

الملخص ……..…….....v

List of contents.....vi

List of figures.....xiii

List of plates..... ..xv

List of abbreviations.....xvi

List of appendices…….....xvii

Chapter One and Objectives

Introduction

1.1 Cervical cancer.....1

1.2 Symptoms.....1

1.3 Epidemiology.....5

1.4 Incidence .. ……..…5

1.5 Mortality of cervical cancer…….....6

1.6 Types of cervical cancer.....……..……7

1.6.1 Cervical Squamous cell carcinoma…….....……...……7

1.6.2 Cervical Adenocarcinoma…….....8

1.7 WHO and Bethesda classification system...…….……...…....…8

1.8 Stages of cervical cancer…….....9

1.9 Cytological diagnosis; Papanicolaou test - Pap test……..….10

1.10 Treatment…….……13

1.11 Vaccination……...……...……14

1.12 Risk factors……..……...……15

1.12.1 Human papilloma virus infection ……..15

1.12.2 Smoking……...……16

1.12.3 Alcohol……..17

1.12.4 Sexual activity ……..……...…17

1.12.5 Oral contraceptives……...……18

1.12.6 Genetic susceptibility…….……..18

1.12.7 Nutrition ……..……19

1.12.8 Parity…….19

1.12.9 Immunosuppression ……20

1.12.10 Socio-economic factors……...20

Rationale…….21

Objectives.....22

Chapter Two - II

Literature Review

2 Human papillomaviruses…….....23

2.1 HPV prevalence……23

2.2 Taxonomy of papillomavirus……24

2.2.1 Family Papillomaviridae…….....……..25

2.2.2 Genus and species……..….27

2.2.3 HPV types ……28

2.2.4 Papillomaviruses Types, Subtypes and Variants……...28

2.3 High and low risk HPVs……...……29

2.4 HPV genome……....29

2.4.1 E1 protein……..32

2.4.2 E2 Protein……..32

2.4.3 E4 Protein……..33

2.4.5 E5 Protein…….....……....33

2.4.6 E 6 oncoprotein……..34

2.4.7 E7 oncoprotein ……..……..….37

2.5 HPV transmission and life cycle…….....41

2.6 Integration of viral genome…….....43

2.7 HPV and cell immortality, transformation and metastasis….……43

Chapter Three

Materials and Methods

3.1 Materials……...44

3.1.1 Study approach and ethics……..44

3.1.2 Study type & design……...44

3.1.3 Study area and time ……..44

3.1.4 Study population……..44

3.1.5 Samples……45

3.1.6 Data collection……45

3.1.7 Data analysis ……...45

3.2 Methods……45

3.2.1 DNA extraction ……..45

3.2.1.1 Removal of paraffin by Xylene…….....……. ……..……..45

3.2.1.2 Addition of ethanol ……..45

3.2.2 DNA extraction kits…….....……46

3.2.3 Measuring DNA concentration..…….....……46

3.3 Polymerase chain reaction -PCR…….....……47

3.3.1 PCR Protocol: GP5+/GP6+ for detection of mucosal HPVs…....48

3.3.2 PCR Protocol: Type specific for HPV 16…….....…..49

3.3.3 PCR Protocol: Type specific for HPV 18…….....……..49

3.4. Agrose gel electrophoresis……..51

3.5 Quality control…….....….....51

Chapter Four

Results

4.1 Patients and controls…….53

4.1. Patients with cervical cancer.....……53

4.1.2 Controls.…….…54

4.2 Detection of mucosal HPVs by PCR.....63

4.2.1 Detection of mucosal HPVs using GP5+/GP6+ PCR in sudanese patients with cervical cancer and controls 63

4.2.2 Identification of HPV16 using type specific PCR primers in patients with cervical cancer …….....63

4.2.3 Identification of HPV18 using type specific PCR primers in cervical cancer ….....……..64

4.3 HPV and age 69

4.4 HPV positivity and geographical sites……...…..71

4.5 HPV and jobs ……...…73

4.6 HPV positivity and tumor differentiation……... 75

Chapter Five

Discussion…….……..79

Conclusion……..……..…87

Recommendations….....…….……..…….88

References

References……..……..89

List of Figures

Fig 1.1 Cervix normal cells and cervical intraepithelial neoplasia (CIN) …….....11

Fige 1.2 Histopathology of the normal cervix and CIN…….....11

Fig 2.1 The *Human papillomavirus* Capsid……...….26

Fig 2.2 The genome of *Human papillomavirus*……....31

Fig 2.3 HPV E6 Interactions with P^{53}…….....36

Fig 2.4 HPV E7 Actions on P^{Rb}……...40

Fig 4.1 Age group of cervical cancer patients……41

Fig4.2 Geographic sites cervical cancer patients ……. 56

Fig4.3 Jobs of cervical cancer patients ……57

Fig4.4 Tumor differentiation of cervical cancer patients……..58

Fig 4.5 Control's clinical conditions ……...…..59

Fig 4.6 Control's age groups……...60

Fig 4.7 Control's geographical sites……..…….……. 61

Fig4.8 Control's jobs ……...……..62

Fig 4.9 HPV16 and HPV18 in cervical cancer patients.....68

Fig 4.10 Positivity of HPV HPV16 and HPV18 in 47 patients aged ≥ 56 & ≤ 55……..…….70

Fig 4.11 Positivity of HPV, HPV16 and HPV18 and patient's geographical sites……71

Fig4.12 HPV and cervical cancer patient's jobs…….....74

Fig4.13a HPV and tumor differentiation of cervical cancer patients……..77

Fig4.13b HPV16 and HPV18 and tumor differentiation of cervical cancer patients…….….78

List of color plates

Plate 1.1A Diagram showing the normal cervix and cervical cancer ...3

Plate 1.1B The normal cervix and cervical cancer..... .3

Plate1.2 Cervical squamous celLcarcinoma……...……...4

Plate 1.3 Pap test: sample collection, smear preparation and microscopic examination …….....12

Plate 4.1 Detection of mucosal HPVs by GP5+/GP6+ PCR in Sudanese women with cervical cancer ……..….....…..….65

Plate 4.2 Detection of HPV16 by type specific PCR primers in cervical cancer.....66

Plate 4.3 Detection of HPV18 by type specific PCR primers in cervical cancer..... ……67

List of Abbreviations

HPV	Human papilloma virus
HPV16	Human papilloma virus genotype 16
HPV18	Human papilloma virus genotype 18
LCR	Long control religion
ORF	Open reading frame
L1	HPV major capsid protein
E6	HPV early protein 6
E7	HPV early protein 7
P^{Rb}	Retinoblastoma tumor suppressor protein
P^{53}	P^{53} tumor suppressor protein
PCR	Polymerase chain reaction
GP5+/GP6+	HPV general primers GP5+ and GP6+
CSCCs	Cervical squamous cell carcinomas
WDSCCs	Well differentiated squamous cell carcinomas
MDSCCs	Moderately differentiated squamous cell carcinomas
PDSCCs	Poorly differentiated squamous cell carcinomas
CIN I	Cervical intraepithelial neoplasia grade I
CIN II	Cervical intraepithelial neoplasia grade II
CIN III	Cervical intraepithelial neoplasia grade III
WHO	World Health Organization
HGSIL	High-grade squamous intraepithelial lesion
IEL	Intraepithelial lesion of the uterine cervix
LGSIL	Low-grade squamous intraepithelial lesion

List of appendices

Appendix I Preparation of Solutions……..……...101

Appendix II Questionnaire……..…….103

Appendix III DNA extraction kit manual……..105

Appendix IV MaximePCR PreMix Kit manual……..……...……107

Appendix V HPV, HPV16 & HPV18 Primers…….108

Appendix VI Sizer. DNA marker ……110