Molecular Identification of Human Papilloma Viruses 16 and 18 among sudaneses patients with oral lesions

A thesis submitted in partial fulfillment of the requirement for the degree of MSc in Medical Laboratory Sciences (Histopathology and Cytology)

Submitted by:
Faris Merghany Eltoom

Supervised by:
Dr. Hussain Gadelkarim Ahmed

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Faris Marghany
ملخص الطرح

هذه دراسة مستعرضة أجريت في المركز القومي بالأشعة والطب النووي بالخرطوم في الفترة من ديسمبر 2009 - أبريل 2010. هدفت هذه التحقيق من فيروس الورم الحليمي البشري لدى المرضى المصابين بأورام الفم الذين راجعوا المركز القومي للإشعاع والطب النووي بالخرطوم. فيروس الورم الحليمي البشري تم التحقق منه في 55 مريض أعمارهم بين 31 و 71 سنة (40 منهم مرضى بسرطان الفم الحرشفي 15 يورم حميد في الفم). الخامل النووي الربيوزي تم استخلاصه من عينات التسبيح ثم طبق تفاعل البلمرة التسلسلي للتحقق من فيروس الورم الحليمي البشري في مجموعة 40 حالة سرطان الفم الحرشفي. فيروس الورم الحليمي البشري تم التعرف عليه لدى 6 (10%) من المرضى كانوا ذكور و 5% كانوا إناثًا. لدى المرضى المصابين بفيروس الورم الحليمي البشري 2 (5%) تم تشخيصهم بفيروس الورم الحليمي البشري من النوع 16 و 4 (10%) من النوع 18. أما المرضى المصابين بأورام حميدة لم يتم التعرف على فيروس الورم الحليمي البشري لديهم. تتوزع الإصابات بسرطان الفم الحرشفي وفقاً لأقامة المرضى كالتالي: 4 مرضى مصابين بسرطان الفم الحرشفي من ولاية الخرطوم، 1 من وسط السودان، 1 من الشرق، 6 من الجنوب، و 18 من شمال السودان. في المقابل، كان المصابين بأورام حميدة في الخرطوم 4 مرضى، 1 من وسط السودان، 1 من الغرب، 3 من الجنوب، 6 من شمال السودان. كما تتوزع الإصابات وفقاً درجة المرض. 16 كانو من الزكور و 4 من الإناث هم من درجة السرطان الجيد التميز، 9 من الزكور و 4 من الإناث هم من درجة السرطان المتوسط التميز، 3 من الذكور و 4 من الإناث هم من درجة السرطان غير واضح التميز. بينما 13 من الذكور و 2 من الإناث هم مصابين بورم حميد.

وأخيرًا، البيانات العلمية المنشورة استمرت تقترح أن الإصابات بفيروس الورم الحليمي البشري يلعب دورًا هاماً في تطور سرطان الفم الحرشفي ومن المحتمل أن تكون بعوامل
خطورة أخرى. الدراسة أوصت بعمل مسوحات أكثر لمجتمعات المرضى باستخدام التقنيات الجزيئية الأكثر تقدمًا لتأكيد دور فيروس الورم الحليمي البشري في تطور سرطان الفم في السودان.
Abstract

This is a retrospective study conducted in Radiation Isotope centre-Khartoum during December 2009 - April 2010. The study aimed to investigate Human Papilloma Virus (HPV) in oral tumor patients were referred to Radiation Isotope centre-Khartoum. HPV was investigate among 55 patients aged between 31-71 years (40 were oral squamous cell carcinoma (OSCC) and 15 were benign lesion). The DNA was extracted from tissue sample then polymerase Chain Reaction (PCR) applied to investigate the HPV. In this study, among 40 patients suffering from OSCC, HPV was identified in 6 patients (10% of patients were males and 5% were females). Among HPV positive patients, 2 (5%) were diagnosed as HPV type (16), and 4 (10%) were diagnosed HPV type (18). However, patients with benign lesion were HPV negative. Distribution of OSCC patients was recorded according to the patient’s residency as follow; 4 patients with OSCC from Khartoum, 1 from the centre of Sudan, 1 from the east, 10 were from west, 6 were from the south, and 18 were from the northern Sudan. In contrast, patients with benign oral lesions, 4 patients were from Khartoum, 1 from the centre, 1 from the west, 3 were from the south, and 6 were from north of Sudan. The OSS patients were diagnosed according to the pathology as fallow; 16 males and 4 females were investigated with well differentiated squamous cell carcinoma, 9 males and 4 females were with moderate differentiated squamous cell carcinoma, and 3 males and 4 females with poor differentiated squamous cell carcinoma. However, 13 males and 2 females were investigated benign oral lesion. Eventually, the existing scientific data continue to suggest that infection of
HPV plays a critical role in the development of OSCC, perhaps in conjunction with other risk factors. The study recommended screening more patients who suffer from OSCC using more advanced molecular techniques to confirm the role of the HPV in developing of OSCC in Sudan.
## List of Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Showing HPV 16 genome</td>
<td>17</td>
</tr>
<tr>
<td>2</td>
<td>Showing the relationship between the oral lesion and gender.</td>
<td>39</td>
</tr>
<tr>
<td>3</td>
<td>Showing the relationship between the HPV and oral lesion.</td>
<td>40</td>
</tr>
<tr>
<td>4</td>
<td>showing the relationship between the HPV and gender</td>
<td>41</td>
</tr>
</tbody>
</table>
### List of Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Showing PCR Program used for amplification of HPV genes.</td>
<td>26</td>
</tr>
<tr>
<td>2</td>
<td>Distribution of the study subjects by age.</td>
<td>31</td>
</tr>
<tr>
<td>3</td>
<td>Distribution of the oral lesions by age.</td>
<td>32</td>
</tr>
<tr>
<td>4</td>
<td>Showing the relationship between the oral lesion and gender.</td>
<td>33</td>
</tr>
<tr>
<td>5</td>
<td>Showing the relationship between the residents and oral lesions.</td>
<td>34</td>
</tr>
<tr>
<td>6</td>
<td>Showing the relationship between the HPV and oral lesions.</td>
<td>35</td>
</tr>
<tr>
<td>7</td>
<td>Showing the relationship between the residents and pathology.</td>
<td>36</td>
</tr>
<tr>
<td>8</td>
<td>Showing the relationship between the pathology and gender.</td>
<td>37</td>
</tr>
<tr>
<td>9</td>
<td>Showing the relationship between the HPV and gender.</td>
<td>38</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>List</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgement</td>
<td>i</td>
</tr>
<tr>
<td>Abstract</td>
<td>iv</td>
</tr>
<tr>
<td>List of Figures</td>
<td>vi</td>
</tr>
</tbody>
</table>
## Chapter one

1. Introduction  

## Chapter two

2. Review of literature  

2.1 Anatomy and histology of oral cavity:  

2.2 Ulcerative and Inflammatory:  

2.2.1 Pyogenic Granuloma  

2.2.2 Aphthous Ulcers  

2.2.3 Actinomycosis  

2.2.4 Oral lesions of Histoplasmosis  

2.2.5 Herpes Virus Infection  

2.2.6 Fungal infection  

2.2.7 Hairy Leukoplakia  

2.2.8 Leukoplakia  

2.3 Benign tumor in oral cavity  

2.3.1 Fibromatosis Gingivae  

2.3-2 Papilloma  

2.3.3 Fibroma:  

2.3.4 Neurilemmoma And Neurofibroma  

2.3.5 Hemangioma
2.3.6 Encephalofacial Angiomatosis (sturge-weber syndrome)

2.3.7 Lymphangioma

2.4 oral cancers

2.4.1 Risk factors of oral cancer

2.4.1.1 Tobacco

2.4.1.2 Alcohol

2.4.1.3 Gender

2.4.1.4 Ultraviolet light

2.4.1.5 Poor nutrition

2.4.1.6 Human Papilloma Virus (HPV) infection

2.4.1.3.1 The HPV Structure and Genome

2.4.1.3.2 HPV Oncogenes and their interaction

2.4.1.3.2.1 E6 Oncoprotein

2.4.1.3.2.2 E7 Oncoprotein

2.4.1.3.3 HPV Life Cycle and Transmission

2.4.1.3.4 High risk HPV types 18 and 16 of oral squamous cell carcinoma

2.5 Diagnosis of oral cancer

2.5.1 Oral brush biopsy

2.5.2 Exfoliative cytology

2.5.3 Cytomorphometry

2.5.4 Immunocytochemistry

2.5.5 Molecular analysis
2.5.5.1 polymerase chain reaction (PCR)

CHAPTER three

2. Objectives

CHAPTER four

4. material and methods

4.1 Study design

4.2 Study Area

4.3 materials

4.4 Tissue sections preparation for polymerase chain reaction (PCR)

4.5 De-paraffinization and re-hydration of sections

4.6 DNA Extraction:

4.7 Polymerase chain reaction (PCR)

4.7.1 Amplification of HPV

4.7.2 Gel-electrophoresis

4.7.3 Interpretation of PCR results

Chapter Five

5. Results

Chapter SEX
6. Discussion

Chapter Seven

7. Conclusions

Chapter eight

8. References.