LEMBAR
HASIL PENILAIAN SJIWAAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH : PROSIDING

Judul karya ilmiah (Paper) : Identification of HPV Types 6 and 11 in Skin Tissue Using PCR
Jumlah Penulis : 3 orang
Sinonim Pengaruh : Penulis Ke 2
Identitas prosiding :
   a. Nama prosiding : Proceedings of the International Stem Cell and Oncology Conference
   b. ISBN/ISSN
   d. Penerbit/Anggota
   e. DOI artikel (jika ada)
   g. Terindeks di Scopus

Kategori Publikasi Makalah
   □ Prosiding ILMIAH Internasional
   □ Prosiding ILMIAH Nasional

Hasil Penilaian Peer Review :

<table>
<thead>
<tr>
<th>Komponen Yang Dinilai</th>
<th>Nilai Maksimal Prosiding</th>
<th>Nilai Akhir Yang Diperoleh</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Internasional</td>
<td>Nasional ***</td>
</tr>
<tr>
<td>a. Kelengkapan unsur isi paper (10%)</td>
<td>95</td>
<td>95</td>
</tr>
<tr>
<td>b. Ruang lingkup dan kekayaan pembahasan (30%)</td>
<td>95</td>
<td>28,5</td>
</tr>
<tr>
<td>c. Kejelasan dan konsistensi data/informasi dan metodologi (30%)</td>
<td>94</td>
<td>28,5</td>
</tr>
<tr>
<td>d. Kelengkapan unsur dan kualitas penulisan/prosiding (30%)</td>
<td>94</td>
<td>28,5</td>
</tr>
<tr>
<td>Total = (100%)</td>
<td>94,7</td>
<td>94,7</td>
</tr>
</tbody>
</table>

Nilai Pengusul

Catatan Penilaian artikel oleh Reviewer

[Insert Notes]

Tanggal : [Insert Date]

Reviewers :

* Dihal ini dua Reviewer secara terpisah
** Cord yang tidak penting
LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH : PROSIDING

Judul karya ilmiah (Paper) : Identification of HPV Types 6 and 11 in Skin Tags Using PCR
Jumlah Penulis : 3 orang
Status Penguji : Penulis Kc 2
Identitas prosiding :
- b. ISBN/ISSN
- d. Penerbit/organisasi : CRC Press
- e. DOI artikel (jika ada)
- f. Akses repository/URL web prosiding : www.crcpress.com
- g. Terjada kes & Scope

Kategori Publikasi Malah
(beri √ pada kategori yang tepat)
- ✔ Proposal Foran Ilmiah Internasional
- □ Prosiding konferensi Ilmiah Nasional

Hasil Penilaian Peer Review:

<table>
<thead>
<tr>
<th>Komponen Yang Dirilai</th>
<th>Nilai Maksimal Prosiding</th>
<th>Nilai Akhir Yang Diperoleh</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Internasional</td>
<td>Nasional ***</td>
</tr>
<tr>
<td>a. Kelengkapan unsur isi paper (10%)</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>b. Ruang lingkup dan kedalaman pembahasan (30%)</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>c. Komplitas dan kompetensi data/informasi dan metodologi (30%)</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>d. Kelengkapan unsur dan kualitas penerbit/prosiding (30%)</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>Total - (100%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Nilai Pengusul

Catatan Penilaian artikel oleh Reviewer:

Pembahasan yang diperoleh dari penulis

Medan,
Reviewere

* Dinilai oleh dua Reviewer secara terpisah
** Catatan yang tidak perlu
# TABLE OF CONTENTS

Chapter 1 | 4 pages
Association of the Anal Position Index (API) with constipation

*By* H.A. Sinuhaji, E. Azlin, Supriatmo, A. Rahmad, A. Sinuhaji, A.B. Sinuhaji

DOWNLOAD
View abstract
Chapter 2 | 5 pages
Comparison of thyroid hormone levels between severe and mild-moderate malnutrition

*By* W. Mondana, T. Sembiring, Y. Dimyati, T. Faranita, W. Pratita

DOWNLOAD
View abstract
Chapter 3 | 4 pages
Identification of HPV types 6 and 11 in skin tags using PCR

*By* J. Karayana, N.K. Jusuf, I.B. Putra

DOWNLOAD
View abstract
Chapter 4 | 4 pages
Ferritin levels after ferrous fumarate supplementation in the 2nd trimester of pregnancy

*By* L.S. Lintang

DOWNLOAD
View abstract
Chapter 5 | 4 pages
The relationship of HER2 overexpression to the histopathologic grading of breast cancer

*By* S. Indriani, K. Siregar, Suyatno

DOWNLOAD
View abstract
Chapter 6 | 4 pages
The association of the nicotine metabolite ratio with lung cancer among smokers

*By* D. Afiani, N.N. Soeroso, E. Mutiara, B.Y.M. Sinaga

DOWNLOAD
View abstract
Chapter 7 | 5 pages
Relationship Between Habitual Snoring and Primary Enuresis in Children

*By* M.A. Mahar, O.R. Ramayani, E. Effendy, M.L.R.S. Siregar, B. Siregar, R. Ramayanti

DOWNLOAD
View abstract
Chapter 8 | 5 pages
Association between hypertension and health-related quality of life in adolescents

*By* N. Rosari, O.R. Ramayani, E. Effendy, R. Siregar, B. Siregar

DOWNLOAD
View abstract
Chapter 9 | 6 pages
Effect of smoking on superoxide dismutase levels in DM with pulmonary TB patients


DOWNLOAD
View abstract
Chapter 10|5 pages
Family support, coping strategies and anxiety in cancer patients

By D.K. Sari, W. Daulay, R. Dewi

DOWNLOAD
View abstract
Chapter 11|4 pages
Vitamin D supplementation in tuberculosis patients: A cross-sectional study

By D.K. Sari, N.K. Arrasyid, R.L. Kusumawati, Y.S. Harahap

DOWNLOAD
View abstract
Chapter 12|4 pages
Effect of different media on Adipose-Derived Stem Cell (ADSC) proliferation

By A. Riliawanati, Arifah Zahra, Sarah Imanissa, Subintoro, B. Ago Halim

DOWNLOAD
View abstract
Chapter 13|4 pages
Far Lateral Approach for Removal of Foramen Magnum Meningioma

By R. Dharmajaya

DOWNLOAD
View abstract
Chapter 14|4 pages
The relationship between neck circumference and BMI with hypertension in children

By S. Soraya, M. Lubis, I.I. Fujiati

DOWNLOAD
View abstract
Chapter 15|4 pages
Trigeminal cardiac reflex in post-operative sphen-oorbital meningioma

By R. Dharmajaya

DOWNLOAD
View abstract
Chapter 16|5 pages
Association between sedentary activities and parental obesity with childhood obesity

By S.M. Lubis, M. Fattah, Damanik, Jose R.L. Batubara

DOWNLOAD
View abstract
Chapter 17|3 pages
Use of C-Reactive Protein (CRP) and haematological score to predict positive blood cultures in sepsis
Differences in C-Reactive Protein (CRP) between depression levels in ischaemic stroke patients

By I.N.D. Lubis, D.E.F. Liestiadi, E. Azlin, S. Nafianti

View abstract
Chapter 18|5 pages

Management of Palpebral Epidermoid Cyst With Tenzel Semicircular Flap Procedure

By S.N. Lubis, W.H. Lubis, I. Nasution

View abstract
Chapter 19|4 pages

The Correlation Between Smoking and Olfactory Function Using Sniffin' Sticks Test

By R.R. Lubis

View abstract
Chapter 20|4 pages

The effect of andaliman fruit extract to blood glucose levels of mice with type 1 diabetes

By R. Lubis, D. Munir, S. Nursiah, H.R.Y. Herwanto

View abstract
Chapter 21|4 pages

Association of birth weight and body mass index with cognitive function at Singkuang

By M. Ridho, D. Lindarto

View abstract
Chapter 22|4 pages

Herbal Medicine Induces Circulation and Proliferation of Endothelial Progenitor Cell (Epc)

By M. Mardia, M. Lubis, I. Fudjiati

View abstract
Chapter 23|5 pages

Relationship between Procalcitonin (PCT) and High-Density Lipoprotein (HDL) in bacterial sepsis

By F. Sandra, D. Munir

View abstract
Chapter 24|5 pages

Relation of Ferritin and Nutrition to Pulmonary Dysfunction in Thalassemia Major

By D. Tarigan, T. Kembaren, A. Rahimi

View abstract
Chapter 25|4 pages
By W. Agusthin, T. Sembiring, P. Sianturi
DOWNLOAD
View abstract
Chapter 34|4 pages
Association between education, length of exposure and economic level with depression

By F. Gurning, V. Camellia, H.T. Parinduri
DOWNLOAD
View abstract
Chapter 35|4 pages
Correlation of irritant exposure with nasal mucociliary transportation time for gas station workers in Medan

By J. Tobing, A.Y.M. Rambe, F. Sofyan, T. Ashar
DOWNLOAD
View abstract
Chapter 36|3 pages
Collection of stem cells in (autologous) donors by apheresis

By H. Vrielink
DOWNLOAD
View abstract
Chapter 37|4 pages
Transfusion of blood components in a stem cell transplant programme

By H. Vrielink
DOWNLOAD
View abstract
Chapter 38|4 pages
The effect of intranasal corticosteroids on nasal polyps as assessed by expression of Tumour Necrosis Factor Alpha (TNF-α)

DOWNLOAD
View abstract
Chapter 39|4 pages
Immuno-expression of the p53 mutant protein in sinonasal squamous cell carcinoma

By A. Yudhistira, R.A. Asnir, Farhat, D. Indriani, H.M.N.D. Lubis
DOWNLOAD
View abstract
Chapter 40|6 pages
The association between physical activity, sedentary behaviour and body mass index in students

By U.H. Surbakti, M.I. Sari, D.D. Wijaya
DOWNLOAD
View abstract
Chapter 41|4 pages
The role of a Simplified Selvester Score as a predictor of successful fibrinolytics in STEMI
Cryptosporidium sp. findings in AIDS patients: A case report

Endoscopic Approach in Maxillary Tumours

Sensitivity and specificity of the urine nitrite test and gram staining in diagnosing UTIs in children

Ascariasis Incidence in Children who Received Single and Repeated Educational Lectures

Comparative time achieved VAS ≤ 3 oxycodone and fentanyl post-operative analgesia

Depressive Syndrome in Patients with Breast Cancer

Infant feeding practices and anaemia in 9-month-old infants

Low survival rate in high-grade osteosarcoma: A retrospective study at a single institution in Indonesia
Relationship of depressive syndrome level with duration of detention and type of crime

Correlation of BDNF and cognitive function in smoking Batak male schizophrenic patients

The effect of hypertonic saline irrigation vs baby shampoo in chronic rhinosinusitis

The relationship polymorphism of gene RFC1 A80G and NSCLP in Sumatera Utara, Indonesia

Association of Matrix Metalloproteinase 2 (MMP 2) and Tissue Inhibitor Matrix Metalloproteinase 2 (TIMP 2) and bone destruction in atticoantral type of Chronic Suppurative Otitis Media (CSOM)

Anti-EGFR nimotuzumab for DIPG in recurrent or children with high grade glioma: 10 years

Diagnostic for TTNA using a Thoracic Ultrasound Guidance for Diagnosing Lung Cancer
Chapter 57|5 pages
The CYP2A13 Arg257Cys Polymorphism and its Relationship to Lung Cancer

By N.N. Soeroso, B.Y.M. Sinaga, R. Zain-Hamid, A.H. Sadewa, E. Syahruddin
DOWNLOAD
View abstract
Chapter 58|7 pages
L858R EGFR mutant expressions in triple negative, luminal and HER2 breast cancer

DOWNLOAD
View abstract
Chapter 59|4 pages
Expression of p53 as a Potential Marker of Muscle Invasiveness in Bladder Cancer

By S.M. Warli, L.I. Laksmi, F. Safriadi, R. Umbas
DOWNLOAD
View abstract
Chapter 60|5 pages
Human Epididymis Protein 4 Immunohistochemistry Expression in Benign Ovarian Cysts

DOWNLOAD
View abstract
Chapter 61|4 pages
The Accuracy of the Paediatric Appendicitis Score (Pas) Based on Age Group in Cases of Acute Appendicitis

By D. Paramitha, E. Fikri, I. Nasution
DOWNLOAD
View abstract
Chapter 62|4 pages
Proportion of ameloblastoma subtypes based on location, size and radiological imaging appearance

By M.M. Christin, T.I. Alferally, Betty
DOWNLOAD
View abstract
Chapter 63|4 pages
Correlation of Subjective Global Assessment with Resting Metabolic Rate and Fat Free Mass as Measured by Bioelectrical Impedance Analysis in Non-Hodgkin Lymphoma

By D. Gatot, A.I. Maria, Safrian
DOWNLOAD
View abstract
Chapter 64|4 pages
Apoptotic Effect of Gentamicin in Cochlea Ototoxic Rat Model (Preliminary Study)

By T.S.H. Haryuna, A.H.W. Purba
Increased expression of TGF-β in the cochlear fibroblast of diabetic model rats

By T.S.H. Haryuna, T. Melinda

Effect of fluticasone furoate on metalloproteinase matrix expression-9 in nasal polyps

By S.V. Hutagalung, F. Sofyan, Suriyanti, D. Munir

Multiplex Testing of Bcr-Abl1 and Jak2 V617f in Suspected Mpn Using Rt-Pcr Rdb Method


Bowolaksono

Effect of Zinc Supplementation on Linear Growth Velocity of Children With Short Stature

By I.T. Pujiastuti, M. Deliana, E. Mutiara, M. Lubis

The Outcomes of Tibial Fracture Patients Who Underwent Orif Compared to MIPO

By R. Oktavia, H. Hanafiah

Association of ascariasis with IL-10 enzyme gene polymorphism in diabetes mellitus patients with tuberculosis


Acetyl salicylic acid resistance and inhibition to platelet aggregation

By D.M. Amoryna, Z. Mukthar, H. Hariman
Identification of HPV types 6 and 11 in skin tags using PCR

J. Karayana, N.K. Jusuf & I.B. Putra

Department of Dermatovenerology, Faculty of Medicine, Universitas Sumatera Utara, Medan, North Sumatera, Indonesia

ABSTRACT: The Human Papilloma Virus (HPV) infection is suspected to be one of the causes of skin tag lesions. In order to identify HPV types 6 and 11 in skin tag lesions using the Polymerase Chain Reaction (PCR) technique, this study is a descriptive study with a cross-sectional design involving 30 skin tag lesions. PCR examination of skin tag lesions was performed to identify HPV types 6 and 11. The collected data was processed and presented descriptively. In this study we found that eight (26.7%) skin tag lesions identified with HPV type 6, and six (20%) skin tag lesions identified with HPV type 11. From a total of 30 skin tag lesions that were examined using the PCR technique, 14 (46.7%) of the lesions identified with HPV types 6 and 11.

Keywords: skin tag, HPV, polymerase chain reaction

1 INTRODUCTION

A skin tag is a benign lesion composed of loose fibrous tissue that occurs mainly on the neck and major flexures as a small, soft, pedunculated protrusion (Quinn & Perkins, 2010). Skin tags may present singly or as multiple lesions, they tend to grow progressively and they do not involute spontaneously. These lesions are commonly found in the adult population over 40 years of age, and increase in incidence in the elderly (Tamega et al., 2010). Skin tags can manifest clinically as three types: multiple small papules, single or multiple filiform, and bag-like pedunculated growths (Shashikala et al., 2014). Histological findings show epidermal slight acanthosis and papillomatosis with a fibrovascular connective tissue core (Hennan, 2005; Ko, 2012).

To date, the aetiology or pathogenesis of skin tags is still unclear. Obesity, ageing, dyslipidemia, diabetes mellitus, pregnancy and Human Papilloma Virus (HPV) have been proposed as a potential aetiological or associated factor of the skin tag (Tamega et al., 2010; Erkek et al., 2011). The HPV infection has been suggested to be one of the factors involved in the pathogenesis of skin tags, and the first study to correlate this theory was conducted by Dianzani et al. in 1998. Dianzani and his colleagues were able to detect HPV DNA 6 and 11 in 88% of the samples of skin tags by using the Polymerase Chain Reaction (PCR) technique (Dianzani et al., 1998).

HPV is a small non-enveloped virus (50–55 nm) that contains a double-stranded closed circular DNA genome associated with histone-like proteins and protected by a capsid formed by two late proteins, L1 and L2 (Fernandez, 2012). Over 100 HPV types have been identified to date. HPV is an epitheliotropic virus that can induce squamous epithelial tumours (benign cutaneous and mucosal lesions) in many different associated anatomical localisations, which produces cytopathic effects in infected keratinocytes (Dianzani et al., 1998; Morshed et al., 2014).

HPV DNA can be detected in biopsy specimens by various methods, such as hybridisation procedures and PCR. PCR is the most widely used method for amplification of nucleic acids, and has a high sensitivity and specificity (Moijn et al., 2005). In this study, PCR was used to detect HPV DNA types 6 and 11 genomes in skin tag lesions.
2 METHOD

This study aimed to detect HPV DNA in skin tags by using the PCR technique. This study was performed on skin tag patients with a clinical and anamnesis diagnosis. Thirty skin tag biopsy specimens were obtained under local anaesthesia from body sites (colli, axillaris, auricularis, and femoralis). The specimens were preserved at below −20°C, and DNA was then extracted from the skin tag samples using a commercial DNA isolation kit from tissue (GeneAid®) according to the manufacturer’s instructions.

All of the samples were subjected to PCR, using primers specific to the HPV genome. The presence of HPV type 6 was investigated by PCR amplification of 258–361 bp (base pairs) target from the locus control region (LCR) using the sequence forward primer 5'-TAGGGACGGTCCTCTATTCC-3' and reverse primer 5'-GCAACAGCCTCTGAGTCACA-3'. The presence of HPV type 11 was investigated by PCR amplification of 356 bp target from the L1 region using the sequence forward primer 5'-GAATACAATGCGCCATGTGGA-3' and reverse primer 5'-AGCAGACGTCCGTTCCTCGAT-3'. The reaction was carried out in a volume of 20 μl containing 12 μl PCR fast ready mix (KAPA 2G®), 2.5 μl forward primer, 2.5 μl reverse primer, and 5 μl DNA isolate. The amplification cycles comprised 1 min at 95°C for initial denaturation, 15 seconds at 95°C for denaturation, 15 seconds at 55–65°C for annealing, 5 seconds/kb at 72°C for extension, and 10 mins at 72°C for the final extension using a thermocycler (Applied Biosynthesis™ Veriti 384®).

For analysis of the PCR product, 5–7 μl amplification product were electrophoresed on 2.5% agarose gel (Bioron®) in Tris Acetate EDTA (TAE) buffer with 1 μl ethidium bromide (Invitrogen®). Gel was visualised on an ultraviolet transilluminator; visualising the 258–361 bp fragment was interpreted as a positive result for HPV type 6 and visualising the 356 bp fragment was interpreted as a positive result for HPV type 11. Precautions to avoid cross-contamination and false-positive results were taken in every assay.

3 RESULT

In this study, 30 samples of skin tag lesions were obtained from 16 skin tag patients (6 men and 10 women), who were in the age group 20 to 60 years. Samples from patients were taken from the following areas: 20 (66.7%) samples from the colli region, 7 (23.3%) samples from the axilla region, 2 samples (6.6%) from the auricularis region, and 3 (10.0%) samples from the femorals region.

Analysis of the presence of HPV DNA by PCR showed that 14 (46.7%) of the 30 positive samples contained HPV DNA, 8 (26.7%) of the positive samples contained HPV type 6 with restriction band level at 258 bp (Figure 1), and 6 (20%) of the positive samples contained HPV type 11 with restriction band level at 356 bp (Figure 2).

![Figure 1. Gel electrophoresis PCR with HPV type 6. Line 1 weight marker 50 bp ladder, line 2 is positive control, line 3 is negative control. Sample nos. 1, 5 and 8 showed a positive band (258 bp).](image-url)
4 DISCUSSION

HPV is epitheliotropic and host-specific, with infection across the species being uncommon (Androph & Kirnbauer, 2012). HPV infection occurs through inoculation of the virus into a viable epidermis through breaks in the epithelial barrier. Maceration of the skin is probably an important predisposing factor. Animal models using HPV virions demonstrate that attachment to heparan sulfate proteoglycans on the basement membrane is a required initial step in natural infection. A furin protease then cleaves L2, inducing a conformation change that allows binding to an unidentified basal cell receptor. This experimental model explains how PV reserve infection factor and specifically target epithelial basal cells (Androph & Kirnbauer, 2012).

Suzuki and his co-workers demonstrated the high association between the presence of HPV DNA types and other benign tumours, such as laryngeal papillomas (Al-Shaji & Al-Baamin, 2005). The clinical condition of skin tags is closely similar to that of mucocutaneous papillomatosis and their clinical behaviour may be reminiscent of that of laryngeal papillomas, which might raise the suggestion of a common aetiology. Since HPV has been detected in many papillomas, they may consequently be responsible for the development of skin tags (Sallam et al., 2003).

The result of this study was in accordance with a study by Gupta et al. (2008), who previously reported the presence of HPV 6/11 DNA in 48.6% of biopsies; however, the results of this study were lower in comparison with the study conducted by Dianzani et al. (1998), who reported the presence of HPV type 6/11 in 88% of skin tag samples, and the study by Sallam et al. (2003), who reported that 23 (76.6%) out of 30 positive samples contained HPV DNA type 6/11.

The finding of HPV DNA types 6 and 11 in biopsies of the skin tag lesions suggests that this virus may be involved in the pathogenesis of these cutaneous lesions. It has been known that skin tags or fibroepithelial polyps are developed in areas of skin that are prone to rubbing or friction (Pezeshkpoor et al., 2012) and can lead to disruption of the skin, which might serve as a route of entry for the virus. The presence of HPV DNA and mechanical friction seem to be significant co-factors in the pathogenesis of skin tags (Shashikala et al., 2014).

It has been postulated that HPV infection begins with the inoculation of the virus into the interrupted epithelium and the interaction with a putative specific cellular receptor (Gupta et al., 2008). HPV infection involves squamous epithelium and can cause growth stimulation, cell proliferation and the formation of pathologic cells (Morshed et al., 2014) through the role of E5 oncoprotein, which can activate growth factor receptors, epithelial hyperplasia, papillomatosis, hyperkeratosis and koilocytic change that are regarded as cytopathic effects of HPV (Shashikala et al., 2014).
CONCLUSION

In this study the presence of HPV types 6 and 11 genomes in the skin tag lesions from different sites could support the viral aetiology theory, but cannot be considered as proof of the aetiological role, because the results of this study are not of a high percentage. The presence of HPV DNA that can affect cellular differentiation and mechanical friction seem to be significant co-factors in the pathogenesis of skin tags.

REFERENCES