



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم



MONA MAGHRABY



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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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التوثيق الإلكتروني والميكروفيلم

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MONA MAGHRABY



A comparative Study Between Needling and Homologous Autoimplantation Techniques in Treatment of Multiple Plantar Warts

Thesis

*Submitted for Partial Fulfillment of Master Degree in
Dermatology, Venereology & Andrology*

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سببنا نك لا علم لنا
إلا ما علمتنا إنك أنت
العليم العظيم

صدق الله العظيم

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List of Contents

Title	Page No.
List of Abbreviations.....	i
List of Tables	i
List of Figures	ii
Introduction	1
Aim of the Work.....	4
Review of Literature	
Warts	5
Prevention and Treatment of Plantar Warts	18
Patients and Methods.....	39
Results	48
Discussion	67
Conclusion	76
Recommendations	77
Summary	78
References	81
Arabic Summary	—

List of Abbreviations

Abb.	Full term
AHAs	Alpha-hydroxy acid
ALA.....	Aminolevulinic acid
CO ₂	Carbon dioxide laser
DNA.....	Deoxyribonucleic acid
DPC	Diphenylcyclopropenone/ diphencyprone
EDV	Epidermodysplasia verruciformis
EQ.....	Erythroplasia of Queyrat
HPV	Human papilloma virus
IFN- α	Interferon alpha
IL	Interleukin
MCA.....	Monochloroacetic acid
MMR	Measles, mumps, and rubella
NK	Natural killer
PDL.....	Pulse dye laser
PDT.....	Photo-dynamic therapy
PPD	Purified protein derivative
RCT.....	Randomized control trial
SA	Salicylic acid
SADBE	Squaric acid dibutyl ester
SCC.....	Squamous cell carcinomas
TCA.....	Trichloroacetic acid
TNF- α	Tumour necrosis factor-alpha

List of Tables

Table No.	Title	Page No.
Table (1):	Morphology of warts	9
Table (2):	Treatment agents of viral warts	37
Table (3):	Demographic data and clinical characteristics of studied patients.....	49
Table (4):	Treatment response among autoimplantation patients group.	50
Table (5):	Master table shows demographic data, clinical characteristics and treatment response of the whole studied autoimplantation patients group.....	51
Table (6):	Treatment response among needling patients group.	52
Table (7):	Master table shows demographic data, clinical characteristics and treatment response of the whole studied needling patients group.	53
Table (8):	Comparison between the 2 studied groups as regard response to treatment after 2, 8 and 12 weeks.....	54
Table (9):	Relation between treatment response after 12 weeks and gender, age, number of warts and duration of lesions among the studied groups.....	55
Table (10):	Relation between treatment response after 12 weeks of procedure (in both responders and non responders patients) and each of gender, age, number of warts and duration of lesions.	56
Table (11):	Comparison between the 2 studied groups regarding reported side effects and complications.....	58

List of Figures

Fig. No.	Title	Page No.
Figure (1):	Variants of cutaneous warts	10
Figure (2):	Variants of anogenital warts and related diseases	12
Figure (3):	Dermoscopy of plantar wart revealing tiny dotted (pinpoint) vessels on a light brownish background typically shows dots and brown to red streaks yhat correspond to hemorrhages,which can help to distinguish warts from callus	13
Figure (4):	Verruca plantaris histopathology	15
Figure (5):	Koilocytic cells	15
Figure (6):	Plantar wart immediately after undergoing needling procedure	33
Figure (7):	(a) paring of donor wart tissue (b) minced wart tissue on a sterile glass slide (c)stab incision being made at the recipient site (d) minced wart tissue being implanted at the recipient site	35
Figure (8):	(a) DermLite DL3 Dermoscope used in the study	42
Figure (9):	(a) Attachment piece of DermLite Dermoscope (b) the dermoscope attached to the digital camera.....	42
Figure (10):	Clinical and dermoscopic pictures of female patient 24 years old with 4 plantar warts in both feet of 12 months duration before and after one session of autoimplantation, treatment response score 3	59

List of Figures Cont...

Fig. No.	Title	Page No.
Figure (11):	Clinical and dermoscopic pictures of male patient 27 years old with 3 plantar warts in sole of left foot of 13 months duration before and after one session of autoimplantation, treatment response score 3	60
Figure (12):	Clinical and dermoscopic pictures of male patient 33 years old with 4 plantar warts in sole of left foot of 12 months duration before and after one session of autoimplantation, treatment response score 2	61
Figure (13):	Clinical and dermoscopic pictures of female patient 25 years old with 9 plantar warts in sole of left foot of 14 months duration before and after one session of autoimplantation, treatment response score 1	62
Figure (14):	Clinical and dermoscopic pictures of female patient 24 years old with 4 plantar warts in left foot of 17 months duration before and after one session of needling, treatment response score 3	63
Figure (15):	Clinical and dermoscopic pictures of male patient 32 years old with 3 plantar warts in sole of left foot of 12 months duration before and after one session of needling, treatment response score 3	64
Figure (16):	Clinical and dermoscopic pictures of female patient 21 years old with 6 plantar warts in sole of left foot of 12 months duration before and after one session of needling, treatment response score 1	65

List of Figures Cont...

Fig. No.	Title	Page No.
Figure (17):	Clinical and dermoscopic pictures of male patient 40 years old with 3 plantar warts in sole of right foot of 15 months duration before and after one session of needling, treatment response score 0	66

INTRODUCTION

Viral wart is a common benign lesion that is caused by various strains of Human papilloma virus (HPV) affecting epithelium of skin and mucous membrane (*Plasenica, 2000*).

Human papilloma virus is a subgroup of viruses belonging to the family Papovaviridae that infect humans, causing warts (papillomas) and other benign tumours as well as cancers of the genital tract, especially of the uterine cervix in women. They are small polygonal viruses containing circular double-stranded DNA (deoxyribonucleic acid) (*Moghaddas, 2004*).

There are over 150 genotypically different types of HPVs some are specifically associated with cutaneous warts and a great number of them are associated with Epidermo-dysplasia verruciformis subtypes favour particular sites but any wart can appear at any site (*Lynch, 2014*).

Warts are typically small, rough, and hard growths that are similar in color to the rest of the skin. They typically do not result in symptoms except when present on the bottom of the feet where they may be painful. While they usually present on the hands and feet they can also affect other locations (*Al Aboud and Nigam, 2017*). They include: common warts or verruca vulgaris (HPV types 2 and 4), butcher's warts (HPV type 7), filiform warts, palmoplantar warts or myrmecia (HPV type 1), mosaic warts, periungual warts, plane or flat warts

(HPV types 3 and 10), genital warts (HPV types 6,8,16 and 18), intraoral warts and Epidermodysplasia verruciformis (HPV types 5, 8, 20 and 47) (*Lynch, 2014*).

There are different treatment strategies for warts, most treatments work by destroying affected tissues by either a cytotoxic or physically ablative mode of action as chemical, cryo and electrocautery however tissue damage alone may not be enough to produce the relevant cytokines to destroy latent virus in adjacent cells (*Bristow and Stiles, 2012*).

Therefore, immunotherapy seems to be a promising modality in such cases. The role of immunity is documented by the appearance and persistence of warts in immunosuppressed individuals (*Atherton et al., 2017*).

Previous reaserches on successful treatments have been aiming toward creating an enhanced systemic immune response to eradicate the virus including immunotherapy with candida albicans, tuberculin purified protein derivative (PPD) and measles, mumps, and rubella (MMR) vaccines. Moreover, one of these researches including the needling procedure, other including autoimplantation technique, both act by activation of self-cell mediated immunity against HPV (*Liebl and Kloth, 2012*).

In the needling procedure the needle is inserted in the wart tissue and enters the underlying dermis and subcutaneous fat layer. It is hypothesised that the mechanical trauma to the

viral tissue may enhance the inflammatory response through presenting the antigen to immune system and hence this will achieve induction of cell mediated immunity toward viral proteins resulting in eradication of infection (*Liebl and Kloth, 2012*).

Autoimplantation is a minimally invasive procedure helping in treatment of warts also by induction of cell mediated immunity, where one of the lesions is cleaned and pared with the help of surgical blade and transferred to a sterile glass slide followed by minicing the harvested tissue into 1-2 mm sized bit, the minced bits are inserted into a deep subcutaneous pocket at the recipient site (inner aspect of the left forearm) using forceps (*Das et al., 2016*).