

بسم الله الرحمن الرحيم





شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



جامعة عين شمس

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Efficacy and Safety of Diphenylcyclopropenone (DPCP) as a Depigmenting Therapy in Extensive Vitiligo

Thesis

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in Dermatology, Venereology and Andrology*

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالَ

لَسْبَدَانِكَ لَا عِلْمَ لَنَا
إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ
الْعَلِيمُ الْعَظِيمُ

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ABSTRACT

Background: Patients with extensive vitiligo who have residual pigmentation affecting exposed areas especially acral sites or patients with vitiligo universalis often seek depigmentation. At present, there is no ideal depigmenting therapy available. Possible options include; monobenzyl ether of hydroquinone (MBEH) cream, phenol, cryotherapy and Q-switched lasers. Diphenylcyclopropenone (DPCP) has been reported to rarely cause vitiligo as a side effect during the treatment of alopecia areata.

Aim: The aim of the present work is to evaluate the efficacy and safety of DPCP as a depigmenting therapy in extensive Vitiligo.

Patients and methods: This is a pilot single arm clinical trial study. Twenty patients with extensive vitiligo were recruited from the vitiligo outpatient clinic of Dermatology, Venereology and Andrology Department, Ain Shams University Hospitals. We used DPCP applied topically to residual pigmented patches (sensitization session then therapeutic sessions).

Results: Depigmentation occurred among 5 patients (25% of cases). Depigmentation occurred in different tested sites including the scalp, forearm and back. Itching and blister formation were the main side effects leading to intolerability to the DPCP treatment.

Conclusion: Cosmetic result of DPCP depigmentation was acceptable with no skin atrophy. Further studies could be done following other protocols using sensitization dose with less concentrations of DPCP to avoid patients' intolerance to the therapy.

Keywords: Diphenylcyclopropenone, Depigmenting Therapy, Extensive Vitiligo

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List of Abbreviations

Abb.	Full term
AA	<i>Alopecia areata</i>
AFV	<i>Acrofacial vitiligo</i>
ATPase	<i>Adenosine triphosphatase</i>
BB-UVB	<i>Broadband UVB</i>
bFGF.....	<i>Basic fibroblast growth factor</i>
BSA	<i>Body surface area</i>
CO ₂	<i>Carbon dioxide</i>
CS	<i>Corticosteroid</i>
DNCB	<i>Dinitrochlorobenzene</i>
DPCP	<i>Diphenylcyclopropenone</i>
EMA	<i>European Medicines Agency</i>
EMLA	<i>Eutectic mixture of lidocaine</i>
FDA	<i>Food and Drug Administration</i>
GM-CSF	<i>Granulocyte-monocyte colony stimulating factor</i>
GWAS	<i>Genome-wide association studies</i>
HS	<i>Highly significant</i>
HSP	<i>Heat-shock proteins</i>
IFN	<i>Interferon</i>
IL	<i>Interleukin</i>
IQR	<i>Interquartile range</i>
KP	<i>Koebner's phenomenon</i>

List of Abbreviations (Cont...)

Abb.	Full term
<i>KP</i>	<i>Koebner phenomenon</i>
<i>KTP</i>	<i>Potassium-titanyl-phosphate</i>
<i>MBEH</i>	<i>Monobenzyl ether of hydroquinone</i>
<i>MBEH</i>	<i>Monobenzyl ether of hydroquinone</i>
<i>MEL</i>	<i>Monochromatic excimer lamp</i>
<i>MMP-1</i>	<i>Matrix Metalloproteinase-1</i>
<i>N₂</i>	<i>Nitrogen</i>
<i>NB-UVB</i>	<i>Narrowband UVB</i>
<i>NB-UVB</i>	<i>Narrowband ultraviolet B</i>
<i>NK</i>	<i>Natural killer</i>
<i>NS</i>	<i>Non significant</i>
<i>NSV</i>	<i>Non segmental vitiligo</i>
<i>QSA</i>	<i>Q-switched alexandrite</i>
<i>QSR</i>	<i>Q-switched ruby</i>
<i>RNAi</i>	<i>1A2 RNA interference</i>
<i>ROS</i>	<i>Reactive oxygen species</i>
<i>S</i>	<i>Significant</i>
<i>SADBE</i>	<i>Squaric acid dibutylester</i>
<i>SCF</i>	<i>Stem cell factor</i>
<i>SV</i>	<i>Segmental vitiligo</i>
<i>TIM</i>	<i>Topical immunomodulating macrolactams</i>
<i>TNF</i>	<i>Tumor necrosis factor</i>
<i>Tregs</i>	<i>T regulatory cells</i>