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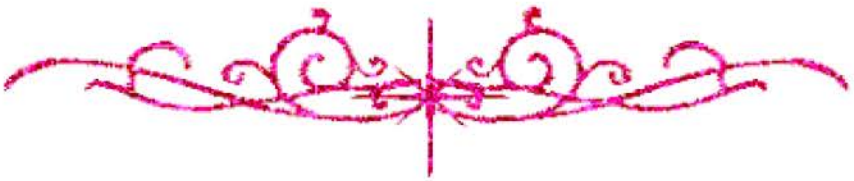

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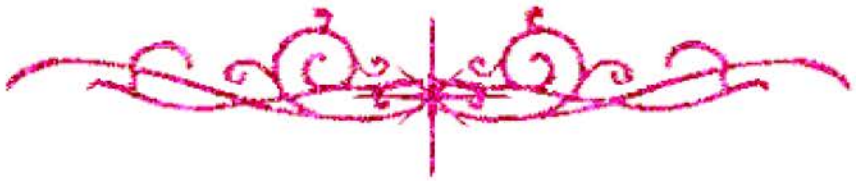

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بالرسالة صفحات

لم ترد بالأصل

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B١٢٧٠٧

The Effect of Photochemotherapy on Tissue Expression of Intercellular Adhesion Molecule-1 (ICAM-1) and its Clinical Outcome in Alopecia Areata, Psoriasis and Scleroderma

Thesis

Submitted for Partial Fulfillment
of the Requirements for the Master Degree
in Dermatology and Venereology

By

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بسم الله الرحمن الرحيم

وقالوا سبحانك لا علم لنا الا ما علمتنا
انك انت العليم الحكيم

سورة البقرة (الآية ٣٢)

صدق الله العظيم

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Shereen Fikri

Abstract

Photochemotherapy is an acronym for psoralen and ultraviolet light type A (PUVA). It involves the combined use of psoralen (8- methoxy-psoralen) and longwave UVA. PUVA is used in the treatment of several common and uncommon skin diseases. Psoralens may be applied topically with subsequent UVA exposure; however, systemic administration has been proved to be more practical, easier to control. However the use of local psoralen bath in some cases with liver diseases did not exclude the occurrence of side effects as systemic absorption dose occur. It has now been demonstrated that PUVA treatment can alter immune function. The effect of PUVA on the expression of cell adhesion molecules in keratinocytes was investigated in vitro. When keratinocytes were treated with PUVA prior to addition of IFN-γ, TNF-α , ICAM-1 and HLA-DR there expression were suppressed.

This study was conducted to evaluate the clinical response, histopathological and immunohistochemical changes after PUVA therapy in alopecia areata, psoriasis and scleroderma for better understanding of their etiology, and to find out if there is a correlation between the dose of UVA and the changes in the pattern of ICAM-1 expression.

In the alopecia areata group, our findings demonstrated a statistically highly significant difference between pre and post PUVA therapy by improved clinical response, diminished lymphocytic and histocytic infiltration, increased number of hair follicles, diminished epithelial and endothelial cells ICAM-1 expression. Also , we found that, there was a statistically significant correlation between high UVA dose in relation to clinical improvement and diminished epithelial/ endothelial cells ICAM-1 expression, moreover; the correlation between high UVA dose with the increased number of hair follicles was statistically highly significant.

The studied psoriatic patients group showed the presence of statistically highly significant difference between pre and post PUVA therapy as demonstrated by clinical improvement, diminished infiltration and diminished epithelial/endothelial cells ICAM-1 expression, while; the diminished angiogenesis and histocytic infiltration were statistically less highly significant, and the diminished eosinophilic infiltration was statistically significant. Also, we demonstrated that, there was a statistically significant correlation between high UVA dose and clinical improvement diminished eosinophilic infiltration and diminished endothelial cells ICAM-1 expression.

In patients with scleroderma, we detected that, there was a statistically highly significant difference between pre and post PUVA therapy by clinical improvement, diminished angiogenesis and decreased collagen fibers deposition. On the other hand, we also observed that, there was a statistically significant correlation between high UVA dose and clinical response and diminished collagen fibers deposition. However, a larger group is needed as the diminished expression of endothelial cells ICAM-1 by (P value=0.076) was statistically non significant.