PIGMENTATION

COMPREHENSIVE STUDIES OF VITAMIN D IN VITILIGO: FROM BASIC SCIENCE TO CLINICAL APPLICATION

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Introduction: Autoimmune hypothesis suggested play an important role in the mechanism of vitiligo and has been related with low levels of 25-hydroxyvitamin D (25-(OH)D). Increased level of vitamin D levels may impede the autoimmune process in vitiligo. However, the effect of combination therapy of NB-UVB nor excimer light phototherapy with vitamin D3 supplement in vitiligo has never been studied before.

Objective: To analyze the effect of combination therapy of NB-UVB phototherapy or excimer light and vitamin D3 supplementation 5000 IU, with monotherapy of NB-UVB or excimer light phototherapy to induce repigmentation and increase serum 25-(OH)D levels in vitiligo patients.

Materials and methods: The study included 24 adult vitiligo and 16 childhood vitiligo patients. In adult vitiligo, group I received combined NB-UVB phototherapy and 5000 IU vitamin D3, and in childhood vitiligo received combined excimer light phototerapy and 5000 IU vitamin D3. Group II in both vitiligo, received phototerapy only. All the experimental did in 8 weeks. The serum 25(OH)D level and vitiligo area scoring index (VASI) were measured before and after therapy.

Results: In adult vitiligo, group I showed very significant increase of 25-(OH)D with average increase was 288.65% ($p=0.001$) and 33.63% ($p<0.05$) in Group II, with comparison of VASI score between both Groups was significant. In childhood vitiligo, the average increase of 25-(OH)D level in group I was 324.00±119.06% and 29.84±36.10% in Group 2. However, comparison between VASI score changes between both groups showed p value

0.681 ($p>0.05$).

Conclusions: Combination of NB-UVB phototherapy and vitamin D3 gave better effect than monotherapy of NB-UVB to induce repigmentation based on VASI and increased 25-(OH)D levels. However, combination excimer light phototherapy- vitamin D gave better effect in increasing 25-(OH)D levels, but not repigmentation. Oral vitamin D has enhancing effect in repigmentation if combine with NB-UVB phototherapy.