



PIGMENTATION

HOMOCYSTEINE LEVELS IN BLOOD AND SEVERITY OF VITILIGO BEFORE AND AFTER NBUVB PHOTOTHERAPY

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Introduction: Vitiligo is a common multifactorial pigmentary disorder with a complex pathogenesis. Recently, it has been seen that serum homocysteine may interfere with normal melanogenesis and play a role in the pathogenesis of vitiligo. It has been found that vitamin D3 influences cellular homocysteine levels by direct regulation of cystathionine β -synthase. NB-UVB by causing an increase in vitamin-D3 levels may cause a reduction in serum homocysteine and thus, improvement in vitiligo patients.

Objective: To determine the relationship between homocysteine levels in blood and the severity of vitiligo and to study the effect of narrowband UVB phototherapy on the levels of homocysteine in patients of vitiligo.

Materials and Methods: A total of 50 vitiligo patients and 50 controls were included in the study. The patients were administered NBUVB for 6 months three times a week. Serum homocysteine and VASI score were determined at 0 and 6 months of NBUVB phototherapy.

Results: The mean serum level of homocysteine was significantly higher in patients with vitiligo than in controls (18.09 ± 9.97 vs 10.79 ± 5.74 $\mu\text{mol/L}$). The correlation between mean serum homocysteine and mean VASI score was strongly positive ($r=0.82$). Mean homocysteine levels were significantly higher in patients with unstable vitiligo than stable vitiligo. NBUVB phototherapy resulted in a significant decrease in the levels of serum homocysteine. The correlation between mean percentage reduction in homocysteine levels and mean percentage improvement in VASI score was statistically significant.

Conclusions: Elevation in serum homocysteine may be a precipitating factor in the pathogenesis of vitiligo. Serum homocysteine is a good marker for severity, extent and progression of vitiligo. NBUVB causes reduction in serum homocysteine levels and improvement in VASI score. Homocysteine lowering agents should be added to the vitiligo treatment protocol.

