



**Effect of isotretinoin treatment on the levels of serum homocysteine, vitamin B<sub>6</sub>, vitamin B<sub>7</sub>, vitamin B<sub>12</sub> and folic acid and on sebum composition in patients with moderate to severe acne vulgaris.**

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**Abstract:Background:**Acne Vulgaris(AV) is related to the pilosebaceous follicle. It is considered as adolescent disorder which is characterized by formation of open and closed comedones, papules, pustules, nodules and cysts.Isotretinoin is the only systemic therapy, which has advantages of cure, but causes significant side effects at higher doses.

**Objective:** The current study was conducted to evaluate serum homocysteine, vitamin B<sub>6</sub>, vitamin B<sub>7</sub>, vitamin B<sub>12</sub> and folic acid and on sebum composition after treatment with isotretinoin.

**Methods:** This study was conducted on thirty patients with AV. Clinical and laboratory evaluations were conducted before the start of therapy, 6 weeks after, and 12 weeks after treatment.serum homocysteine, vitamin B<sub>6</sub>, vitamin B<sub>7</sub>, vitamin B<sub>12</sub>, folic acid liver function tests, serum cholesterol and triglyceride, creatinine levels were tested as well as sebum cholesterol and sebum squalene.SPSS 20 was used for statistical analysis.

**Results:** The results of the study showed significant differences ( $p < 0.05$ ) in homocysteine, vitamin B<sub>6</sub>, vitamin B<sub>7</sub>, vitamin B<sub>12</sub>, folic acid, GGT, ALP, ALT, serum cholesterol, triglyceride, sebum cholesterol and sebum squalene and skin moisture levels, while there were no significant differences in skin temperature, skin skin pH and creatinine.

**Conclusions:**Evaluation of homocysteine, vitamin B<sub>6</sub>, vitamin B<sub>7</sub>, vitamin B<sub>12</sub> and folic acid beside the routine tests were beneficial for the patients before they started isotretinoin treatment.

**Keywords:**Acne Vulgaris, homocysteine, vitamin B<sub>6</sub>, vitamin B<sub>7</sub>, vitamin B<sub>12</sub> and folic acid.

International Journal of ChemTech Research, 2018,11(03): 165-170.

DOI :<http://dx.doi.org/10.20902/IJCTR.2018.110318>

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