

Insulin-like growth factor 1 in pathogenesis of acne vulgaris, is it related to acne severity?

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Abstract

Background: Acne vulgaris is a multi-factorial skin disease. A possible role for insulin like growth factor-1 (IGF-1) in the pathogenesis of acne has been suggested. Several studies showed that elevated levels of serum IGF-1 may correlate with overproduction of sebum and acne.

Objective: Measurement of the serum level of IGF-1 in acne patients in comparison to normal controls, and evaluating the relationship of these levels to severity of acne and body mass index (BMI), in order to investigate the role of this factor in the pathogenesis of acne.

Patients and methods: Fifty-four patients with acne vulgaris and 42 healthy controls were included. History taking, dermatological examination, clinical assessments of acne severity, calculation of BMI were performed for all patients. Blood samples were collected from all participants for estimation of serum IGF-1 level using enzyme linked immunosorbant assay (ELISA).

Results: There was a significantly higher serum IGF-1 level in acne patients ($p < 0.05$) than controls. We didn't find a relation of significance between elevated serum IGF-1 level and degree of acne severity and BMI ($p > 0.05$). There was a significant positive correlation between serum IGF-1 level and patients' ages.

Conclusion: There is a significantly higher serum IGF-1 in acne patients than controls not related to acne severity and BMI. That is adding to the scientific evidence of IGF-1 role in pathogenesis of acne vulgaris.

Key words: Acne vulgaris - IGF-1 – pathogenesis - acne severity – BMI.