Impact of low ghrelin level in patients with postadolescent acne

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Abstract

Background: Ghrelin is a 28 amino acid peptide predominantly produced by the stomach. There are many putative roles for ghrelin beyond homeostatic appetite control.

Aim of the work: To determine ghrelin's level in postadolescent acne and study its relationship to plasma lipid profile, IR and acne severity and to correlate variables.

Patients and methods: This is a case-control study where 50 patients with postadolescent acne and 50 age-sex compatible controls were enrolled. Acne severity was assessed according to the Hayashi acne grading criteria. The parameters measured were serum level of ghrelin, fasting blood glucose, total cholesterol, low-density lipoprotein, high-density lipoprotein, triglycerides, and insulin.

Results: The mean serum level of Ghrelin was significantly lower in patients compared to control group and acne severity had a significant effect on ghrelin's level. Serum levels of insulin, fasting glucose, HOMA-IR, and TG were significantly increased in patients group compared to control. Serum TC, HDL, and LDL showed no significant difference between both studied groups. Ghrelin hormone had a positive correlation to HDL and a negative correlation to BMI, LDL, HOMA-IR, and Insulin.

Conclusion: This study postulated that low level of ghrelin may predispose patients with postadolescent acne to hyperinsulinemia, type 2 diabetes or dyslipidemia.