

عنوان مقاله:

ASSOCIATION OF CHEMERIN LEVELS WITH ANTHROPOMETRIC INDEXES AND C-REACTIVE PROTEIN IN
OBESE AND NON-OBESE ADOLESCENTS

محل انتشار:

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نویسندگان:

Zahra Maghsoudi - *Food Security Research Center AND School of Nutrition and Food Sciences, Isfahan University of
Medical Sciences, Isfahan, Iran*

Roya Kelishadi - *Department of Pediatrics AND Child Growth and Development Research Center, Research Institute
for Primordial Prevention of Non-Communicable Disease, Isfahan University of Medical Sciences, Isfahan, Iran*

Mohammad Javad Hosseinzadeh-Attar - *Department of Clinical Nutrition, School of Nutritional Sciences and Dietetics
AND Department of Nutrition and Biochemistry, School of Public Health, Tehran University of Medical Sciences,
Tehran, Iran*

خلاصه مقاله:

BACKGROUND: Obesity is a low-grade chronic inflammation. This epidemic is growing in different age groups including adolescents. It is accompanied with a decrease in the age for incidence of obesity-related disorders. Chemerin, as a chemokine and stimulator of anti-inflammatory adiponectin, links immune system, adipose tissue and inflammation. It may be useful in predicting obesity in the hit phase of life. This study aims to assess serum chemerin and adiponectin in relation to the inflammation and obesity indices. **METHODS:** This case-control study was conducted on ۸۲ adolescent girls, aged ۱۲-۱۸ years. They were categorized based on the percentiles of the body mass index (BMI). Serum chemerin, adiponectin, high-sensitive C-reactive protein (Hs-CRP), body fat mass and its percent, waist circumference (WC), hip circumference (HC) were measured; BMI and waist-to-hip ratio (WHR) were calculated. Data were analyzed by independent Student's t-test and Pearson correlation; path analysis was conducted, as well. **RESULTS:** We found a negative significant association between chemerin and adiponectin levels in both obese and non-obese groups ($r = -0.387$, $P = 0.014$ vs. $r = 0.362$, respectively, $P = 0.018$). Serum chemerin was higher in obese than in non-obese adolescents (441.83 ± 47.79 vs. 409.30 ± 66.12 $\mu\text{g/l}$, respectively, $P = 0.012$), whereas mean adiponectin level was lower in obese participants than in the other group (4.79 ± 0.94 versus 5.2 ± 0.53 $\mu\text{g/ml}$, respectively, $P = 0.016$). Chemerin concentrations had significant positive correlation with Hs-CRP levels, BMI, WC, HC, WHR, body fat mass and its percent ($P < 0.05$). **CONCLUSION:** Chemerin concentrations were associated with and adiponectin levels in obese girl adolescents, negatively. Hs-CRP, BMI, WC, HC, WHR, body fat mass and its percent were in positive relation with chemerin levels, and inverse association with serum adiponectin concentrations. Our findings suggest that chemerin can be considered as an early marker of the inflammatory process in obesity

کلمات کلیدی:

Chemerin, Adiponectin, Obesity, Inflammation, Adolescents

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