Relationship of serum leptin level with irritable bowel syndrome

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Abstract

Background and Objective: Stress has been known as an important causative factor in irritable bowel syndrome. Various studies have indicated the relationship between serum leptin levels and stress levels. This study was undertaken to investigate the relationship between serum leptin levels with irritable bowel syndrome.

Materials and Methods: In this case-control study, eighty irritable bowel syndrome patients and 80 controls were recruited. All participants were asked to fill in a questionnaire included demographic information and medical history as well as a stress questionnaire. Serum leptin level was measured by ELISA method. Chi-square, student t-test, pearson correlation and logistic regression were used for investigating the relationships between variables.

Results: Participants in irritable bowel syndrome group had significantly higher stress levels than controls (p<0.05). In the other hand, Serum leptin levels were significantly lower in irritable bowel syndrome group than the other one (p<0.05). Multivariate logistic regression analysis showed that after adjustment of stress level and body mass index, serum leptin level was still significantly lower in irritable bowel syndrome group (Odds ratio=0.9; CI95%:0.85-0.94).

Conclusion: The present study indicated that there is a relationship between leptin and irritable bowel syndrome and serum leptin level is significantly lower in irritable bowel syndrome group than controls. This relationship is independent of other variables such as stress levels, BMI.

Keywords: Irritable Bowel Syndrome, Leptin, Stress

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