Effect of Thioflavin-T on leptin, adiponectin levels,biochemical parameters and liver histological on male NMRI with high fat diet

Abstract:

Introduction: Obesity is considered to be a major risk factor for chronic diseases such as CHD and hypertension, type 2 diabetes, and some types of cancer. Obesity is a chro nic disease of multifactorial origin and can be defined as an increase in the accumulati on of body fat. Effect of Thioflavin-T was evaluated on body weight and blood glucos e, insulin, insulin resistance, leptin, adiponectin, cholesterol,LDL,HDL,triglyceride, a spartate amino transferase, alanine amino transferase, alkaline phosphatase and liver h istological in male NMRI mice with high fat diet.

Materials and methods:The mice were randomly divided into five groups: The normal group,sham group,Experimental group 1:mice were given Thioflavin-T 5 mg/kg, Expe rimental group 2: Thioflavin-T 10 mg/kg, Experimental group 3: Thioflavin-T 15 mg/ kg via intragastric gavage for 4weeks.

Results: In the present study the amount of body weight of experimental groups treate d compared to Sham group statistically significant decrease. The amount of leptin, ins ulin and blood glucose, cholesterol, serum LDL, TG of the experimental groups com pared to sham group showed a significant decrease. Serum adiponectin levels and ser um HDL levels in the experimental groups compared to the sham group was increase d. administration of thioflavin-T in different doses, causes finding polymorphonuclea r cells in liver of the experimental groups, which the amount of these cells was more i n the experimental group3.

Conclusion: It could be suggested that Thioflavin-T may be potentially effective candi dates in obesity treatment and diabetes.

Keywords: obesity, Thioflavin-T, leptin, adiponectin