EuroSciCon

7th European Congress on

Obesity and Eating Disorder

April 12-13, 2018
Amsterdam, Netherlands

J Obes Eat Disord 2018, Volume: 4
DOI: 10.21767/2471-8203-C1-009

INFLUENCE OF L-CARNITINE ON THE EXPRESSION LEVEL OF ADIPOSE TISSUE MIRNAS RELATED TO WEIGHT CHANGES IN OBESE RATS

Maryam Nazari, Majid Karandish and Alihossein Saberi
Ahvaz Jundishapur University of Medical Sciences, Iran

Background: Molecular mechanisms of most anti-obesity drugs are remained to be clear. MicroRNAs that are non-coding RNA molecules supposed to regulate biological processes concomitant to obesity and have attracted a lot of attention in scientific communities. miR-27a and miR-143 expression levels in obese and non-obese rats during weight changes and L-carnitine (LC) effects on them was investigated in this study.

Material & Methods: In the present study, 12 male Wistar rats were randomly divided into normal-fat diet (NFD) and high-fat diet (HFD) groups to develop obesity. After 8 weeks, rats were weighted and half of diet induced obese rats were randomly selected to receive 200 mg LC kg-1 body weight for 4 weeks. At the end, epididymal fat was isolated to investigate expression level of microRNAs by real-time PCR.

Results: After 12 weeks, HFD in comparison with NFD caused significant decrease and increase in expression levels of miR-27a and miR-143 respectively. These changes were modified in groups which had received LC in a 4-weeks period. Furthermore, rats in this group gained less weight.

Main Conclusions: Findings of this study suggest that the changes of microRNAs expression probably play a role in pathogenesis of obesity. They might be modulated by means of dietary agents and supplements and modify weight gain trend.

maryam.nazary1@yahoo.com