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Effect of different dietary patterns on hepatic inflammatory cytokines in NAFLD rats

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To test the changes of inflammatory factors IL-1 β , IL-18, NLRP3, caspase-1 of serum and liver of NAFLD rats, in order to investigate the influence of dietary factors on the pathogenesis of NAFLD. 12 normal rats as the control group and 48 NAFLD model rats which were fed with high-fat diet for 8 weeks and were successful model according to serum biochemical indexes and liver pathology results were divided into four groups randomly, namely: High-fat diet group, high-protein diet group, high-carbohydrate diet group and normal diet group. These rats were randomly selected to be killed after feeding for 4 and 8 weeks. The expression level of serum IL-1 β , IL-18 was tested by ELISA. The level of IL-1 β , IL-18, NLRP3 and caspase-1 mRNA of liver was assayed by qRT-PCR. The method of Western blot was used to detect the protein level of NLRP3 and Caspase-1 of liver. The level of serum inflammatory cytokines IL-18, IL-1 β and the transcriptional level of IL-1 β , IL-18, NLRP3, caspase-1 mRNA and the expression of protein of NLRP3, caspase-1 in high-fat diet group, high-protein diet group and high-carbohydrate diet group were increased. It presented that IL-1 β , IL-18, NLRP3 and caspase-1 participated in chronic inflammation in the course of the development of NAFLD. Irrational structure of dietary can aggravate the development of NAFLD and high-fat, high-protein and high-carbohydrate diet are the risk factors of NAFLD.

Biography

Jiang Jian-Hua has completed her higher education from the Anhui Medical University, China.

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