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高脂饮食诱导的肥胖倾向和肥胖抵抗大鼠胃组织和血浆ghrelin水平的研究 点此下载全文

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摘要:

目的:探讨高脂饮食诱导的肥胖倾向(0P)与肥胖抵抗倾向(0RP)大鼠体内ghrelin水平的差异。方法:将20只健康雄性Wistar大鼠以高脂饲料喂养10周后,根据体重增量的不同划入0P组与0RP组,每组6只。记录体重和摄食量,测定内脏脂肪含量、血糖、血脂、血浆胰岛素和血浆ghrelin水平,检测大鼠胃组织ghrelin蛋白表达水平。结果:0P大鼠体重增量、能量利用率、内脏脂肪含量明显高于0RP大鼠(P<0.01);与0RP大鼠相比,0P大鼠血浆ghrelin水平有降低趋势(P=0.07),而胃组织ghrelin表达极显著增高(P<0.01);大鼠胃组织ghrelin表达水平与体重增量(P<0.05)、肾周脂肪重量(P<0.05)呈正相关关系。结论:胃组织ghrelin表达水平可能是高脂饮食条件下大鼠发展为肥胖倾向或肥胖抵抗倾向的重要影响因素。

关键词: ghrelin 肥胖倾向 肥胖抵抗倾向 大鼠 高脂饮食

A study on stomach and plasma ghrelin levels in high fat diet-induced obesity-prone and obesity-resistant rats $\underline{\text{Download Fulltext}}$

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Abstract:

Objective: To explore the difference of plasma ghrelin and ghrelin expression in stomach between high fat diet induced obesity-prone(OP) and obesity-resistance-prone(ORP) rats. Method: Twenty male Wistar rats were fed with high fat diet for 10 weeks and then were divided into obesity-prone group and obesity-resistant group according to weight gain. There were six rats in each group. Body weight, food intake, and visceral fat were measured. Glucose, triglyeride(TG), total cholesterol(TC), high density lipoprotein cholesterol(HDL-C), low density lipoprotein cholesterol(LDL-C), insulin and ghrelin were assayed in fasting plasma. Ghrelin expression in stomach were investigated by Western Blot. Result: Body weight gain, energy efficiency, and visceral fat depots in OP rats were significantly higher than ORP rats(P<0.01); Compared with ORP rats, OP rats had an increased tend in plasma ghrelin(P=0.07) and a significantly elevated expression in stomach ghrelin(P<0.01); Stomach ghrelin expression was positively correlated to body weight gain, weights of perirenal fat pads in the high fat diet-fed rats. Conclusion: Ghrelin expression in stomach may affect obesity-prone or obesity-resistance-prone development in the rats fed with high fat diet.

Keywords:ghrelin obesity-prone obesity-resistant-prone rat high fat diet

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