

论著

鬼箭羽对2型糖尿病血瘀证大鼠血糖及血液流变学的影响

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摘要:

目的: 研究鬼箭羽对2型糖尿病血瘀证大鼠血糖及血液流变学的影响。方法: 喂饲高脂饲料加链脲佐菌素腹腔注射造成2型糖尿病模型后, 再注射强的松龙和肾上腺素制备成中医血瘀证大鼠模型, 从而得到2型糖尿病血瘀证中医病症大鼠模型。随机将制模成功的大鼠分为模型组、鬼箭羽组、优降糖组 3 组, 并设立空白对照组。鬼箭羽组给予鬼箭羽灌胃, 优降糖组给予优降糖灌胃, 模型组与空白对照组给予生理盐水灌胃。干预4周后, 观察各组大鼠一般情况, 并检测各组大鼠的空腹血糖、血液流变学指标变化。结果: 鬼箭羽组大鼠与模型组相比较, 多饮、多尿等症状改善, 体质量增加 (P<0.05), 其毛色、毛态、精神状态、捕捉时抵抗力、舌质瘀斑等也有改善。优降糖组大鼠较模型组体质量有所增加, 但精神不振、捕捉时抵抗力减弱、体毛无光泽、竖立、打结、舌质瘀斑仍较明显。鬼箭羽组大鼠空腹血糖含量与模型组比较差异有统计学意义 (P<0.05)。鬼箭羽组大鼠的全血黏度(切变率1, 5, 50, 100 s<sup>-1</sup>)、血浆黏度、红细胞压积的血液流变学指标明显低于优降糖组、模型组, 差异具有统计学意义 (P<0.01或P<0.05)。结论: 鬼箭羽在降低2型糖尿病血糖的同时对血瘀证亦具有一定的改善和治疗作用。

关键词: 鬼箭羽; 2型糖尿病; 血糖; 血瘀证; 血液流变学; 全血黏度; 血浆黏度; 红细胞压积; 大鼠

Effect of Euonymus alatus on the blood glucose and hemorheology in the rat model of Type 2 diabetes mellitus with blood stagnation

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Abstract:

Objective To explore the effect of Euonymus alatus on the blood glucose and hemorheology in rat model of Type 2 diabetes mellitus with blood stagnation (DMBS). Methods High fat diet with streptozocin was used to establish the rat model of Type 2 diabetes mellitus, followed by the prednisolone and adrenaline muscle injection to obtain DMBS. DMBS rats were divided into a DMBS group (treated with saline gavage), an Euonymus alatus group (treated with Euonymus alatus gavage), and a glybenzoylamide group (treated with glybenzoylamide gavage). A blank group was treated with saline gavage. The experiment lasted 4 weeks, followed by the evaluation of rats' behavior, and dection of fasting blood glucose and hemorheology. Results Compared with DMBS rats, the symptoms of polydipsia and diuresis in Euonymus alatus rats were improved, with increased body weight (P<0.05), better fur and mental state, increased resistance for being caught, and reduced tongue stagnation. Compared with DMBS group, though body weight increased, resistance for being caught decreased in the glybenzoylamide group with bad fur and mental state, and tongue stagnation. As to the fasting blood glucose, there was significant difference between the Euonymus alatus group and the DMBS group (P<0.05). As to the hemorheology, including whole blood viscosity (shear rates 1, 5, 50, and 100 s<sup>-1</sup>), plasma viscosity, and hematocrit, the Euonymus alatus rats had a better efficacy than DMBS rats and glybenzoylamide rats (P<0.05 or P<0.01).

Conclusion Euonymus alatus can reduce the fasting blood glucose of DMBS and improve blood stagnation.

Keywords: Euonymus alatus; Type 2 diabetes mellitus; fasting blood glucose; blood stagnation; hemorheology; whole blood viscosity; plasma viscosity; hematocrit; rats

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