



中文标题

检索

跨刊检索

盐酸川芎嗪对同型半胱氨酸致ECV304细胞损伤的保护作用

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中文摘要:目的:研究盐酸川芎嗪对同型半胱氨酸损伤的ECV304细胞的保护作用。方法:选择人脐静脉内皮细胞ECV304作为体外研究对象,同型半胱氨酸作为造模剂,监测NOS和NO含量的变化判断其损伤程度。确定同型半胱氨酸损伤ECV304细胞时最佳浓度、最佳作用时间,建立内皮细胞损伤模型。在此基础上检测盐酸川芎嗪作用损伤内皮细胞NO和NOS含量,研究其对内皮细胞的保护作用。结果:同型半胱氨酸损伤ECV304细胞的最适浓度为 $1\text{ mmol} \cdot \text{L}^{-1}$,最佳作用时间为48h,建立内皮细胞损伤模型。阳性药物硝酸甘油和盐酸川芎嗪对ECV304细胞的损伤具有保护作用,NOS和NO生成量与模型组相比显著升高。结论:盐酸川芎嗪具有ECV304细胞保护作用,本实验所建模型可用于筛选以内皮细胞保护剂为靶点的抗心肌缺血药物。

中文关键词:抗心肌缺血 血管内皮细胞 保护剂 筛选模型

Protective effect of ligustrazine hydrochloride on homocysteine-injured ECV304 cells

Abstract:Objective: To detect the protective effect of ligustrazine hydrochloride on homocysteine-injured ECV304 cells. Method: In the *in vitro* study, human umbilical vein endothelial cells were selected as objects, with homocysteine as the modeling agent, to judge the injury degree by monitoring NOS and NO contents. Based on that, the best homocysteine concentration in ECV304 cells, the best reaction time could be determined, and an endothelial cell injury model was established. After adding ligustrazine hydrochloride, NOS and NO contents in injured endothelial cells were determined to observe the protective effect of ligustrazine hydrochloride. Result: It was proved that the optimal concentration of homocysteine on injured ECV304 cell was $1\text{ mmol} \cdot \text{L}^{-1}$, the best reaction time was 48 h. An injured endothelial cell model was established. At the same time, positive drug nitroglycerin and ligustrazine hydrochloride displayed a protection effect on injured ECV304 cells, NOS and NO formation were significantly increased compared with the model group. Conclusion: Ligustrazine hydrochloride has a protective effect on homocysteine-injured ECV304 cells. The model established in this study can be used to screen anti-myocardial ischemia drugs targeting at an endothelial cell protective agent.

keywords: anti-myocardial ischemic vascular endothelial cells protective agent screening model

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