

## 论著

### 冷冻联合平阳霉素注射作用于兔耳后静脉的实验研究

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#### 摘要:

目的:观察平阳霉素注射、喷射冷冻、喷射冷冻联合平阳霉素注射分别作用于兔耳后静脉所导致的血管内皮细胞及血管结构的形态学改变。方法:18只日本大耳白兔随机分为3组,每组6只。一组于兔耳后静脉注射平阳霉素,一组对兔耳后静脉行喷射冷冻,一组将喷射冷冻与平阳霉素注射联合作用于兔耳后静脉。另取1只白兔作为正常对照。采用光学显微镜及透射电镜观察在处置后1,3,7,14,28和56 d后各组兔耳后静脉的变化。结果:平阳霉素静脉内注射后出现血管内皮细胞增生,管壁增厚,管腔缩窄,最终闭锁;15~20 s的喷射冷冻所致的血栓形成、水肿、炎性浸润等改变为可逆性变化;15~20 s的喷射冷冻联合平阳霉素注射可使局部血栓形成,血管内皮细胞增生,血管腔缩窄并闭锁。结论:15~20 s的喷射冷冻与平阳霉素静脉内注射联合使用,可导致静脉内血栓形成,血管内皮细胞增生,管腔缩窄并闭锁。

关键词: 平阳霉素 冷冻 耳后静脉

### Effect of freezing and pingyangmycin injection on the auricular posterior vein in rabbits

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#### Abstract:

Objective To observe the change of vascular endothelial cells and structure of the auricular posterior vein caused by freezing or pingyangmycin injection alone and freezing in combination with pingyangmycin injection, to investigate the effect of these treatments on the vein. Methods Eighteen rabbits were divided into 3 groups of 6 each, and another rabbit was used as a control. Pingyangmycin was injected into the auricular posterior vein in the first group, spray freezing within 20 seconds on the auricular posterior vein was performed in the second group, and freezing in combination with pingyangmycin injection was performed in the third group. Light microscope and transmission electron microscope were used to observe the change of auricular posterior vein in the rabbits. Results Proliferation of endothelial cells, and thickening of vessel wall were induced by pingyangmycin. Thrombus formation, tissue oedema and inflammatory infiltration induced by spray freezing within 20 seconds were reversible. Thrombus formation, proliferation of endothelial cells and thickening of the vessel wall was induced by freezing in combination with pingyangmycin injection. Conclusion Freezing and pingyangmycin injection have the synergistic effect, resulting in the proliferation of endothelial cells, thrombus formation, thickening of vessel wall, and even occlusion of vessels.

Keywords: pingyangmycin; freezing; auricular posterior vein

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