

论著

体外反搏对心肌缺血犬血流动力学的影响及内皮素机制的探讨

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摘要 目的: 探讨体外反搏改善心肌缺血犬血流动力学的作用和内皮素机制。方法: 19只健康杂种犬随机分为对照组、缺血组和反搏组, 分别于冠状动脉左前降支结扎前和结扎后60 min、120 min、180 min记录以下指标: ①主动脉根部血压; ②左心室收缩和舒张末压、+dp/dtmax和-dp/dtmax; ③头臂干血流量; ④放免法检测血浆和心肌内皮素-1 (ET-1) 的含量。结果: 冠脉结扎1 h, 缺血组和反搏组犬血压、左心室收缩和舒张功能、头臂干血流量明显低于正常组 (P<0.05), 而血浆ET-1水平明显高于正常组 (P<0.05)。经过体外反搏2 h, 反搏组犬的收缩压、舒张压和平均压、左心室收缩和舒张功能、头臂干血流量明显高于缺血组 (P<0.05); 而反搏组犬的血浆和心肌ET-1水平明显低于缺血组 (P<0.05)。结论: 体外反搏可改善心肌缺血犬血流动力学指标, 其机制可能与降低ET-1的产生有关。

关键词 [心肌缺血](#); [反搏动术](#); [血流动力学](#); [狗](#); [内皮缩血管肽1](#)

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Effects of external counterpulsation on the hemodynamics and endothelin-1 in myocardial ischemia canines

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Abstract

AIM: To investigate the effects of external counterpulsation (ECP) on the hemodynamics indexes and endothelin-1 (ET-1) in myocardial ischemia canines. METHODS: Nineteen health dogs were randomly divided into controls, ischemia and ECP groups. The blood pressure, left ventricular systolic and diastolic pressure, +dp/dtmax and -dp/dtmax, brachiocephalic trunk blood flow were recorded. Plasma and myocardium ET-1 levels were determined by radioimmunoassay. RESULTS: 60 minutes after left anterior descending of coronary artery ligation, compared with controls, the blood pressure decreased greatly, left ventricular systolic and diastolic function declined, brachiocephalic trunk blood flow reduced, but plasma ET-1 levels were increased significantly in ischemia and ECP groups (P<0.05). After 2 h ECP treatment, compared with ischemia, blood pressure increased, left ventricular systolic and diastolic function improved, brachiocephalic trunk blood flow raised, but the plasma and myocardium ET-1 levels were decreased in ECP group (P<0.05). CONCLUSION: The results suggest that ECP improves the hemodynamics indexes in myocardial ischemia canine, and ET-1 may play an important role.

Key words [Myocardial ischemia](#) [Counterpulsation](#) [Hemodynamics](#) [Dogs](#) [Endothelin-1](#)

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