

论文

氟碳乳剂稀释血液对心肌缺血时左心室舒张功能的影响

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摘要:

本实验在40只麻醉开胸兔心脏上观察了阻断冠脉血流后左心室舒张功能的变化和氟碳乳剂稀释血液对心肌缺血时左心室-dp/dt_{max}, -V_{CE}和T值变化的影响。实验结果表明,阻断冠脉血流后,-dp/dt_{max}和-V_{CE}均明显降低,T值显著延长。阻断冠脉血流前或阻断冠脉后15min时用氟碳乳剂行等容血液稀释,可使心肌缺血时左心室舒张功能损害明显减轻。

关键词: 心肌缺血 氟碳乳剂 心脏功能

THE EFFECT OF HEMODILUTION WITH FLUOROCARBON EMULSION ON THE CHANGES IN LEFT VENTRICULAR DIASTOLIC FUNCTION FOLLOWING CORONARY OCCLUSION

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Abstract:

Changes in the left ventricular diastolic function following coronary occlusion and the effects of hemodilution with fluorocarbon emulsion on the alterations of -dp/dt_{max}, -V_{CE} and the time constant of isovolumic pressure fall subsequent to -dp/dt_{max}(T) during myocardial ischemia were observed in 40 anesthetized open-chest rabbits. The animals were randomly divided into five groups, animals in group 1 were untreated during myocardial ischemia (control group) and that in group 2 and 3 were hemodiluted with dextran-40 or fluorocarbon emulsion, respectively, at 15 min post-occlusion. Animals of the other two groups, hemodilution with dextran-40 (group 4) or fluorocarbon emulsion (group 5) were performed before coronary occlusion. It was shown that, after coronary occlusion, both -dp/dt_{max} and -V_{CE} were decreased significantly and T was prolonged obviously. At 15 min post-occlusion, -dp/dt_{max}, -V_{CE} and T changed to the same extent in group 1,2 and 3. However, Their alterations were quite different in the three groups after 30 min of coronary occlusion. In group 1, cardiac function was further aggravated; in group 2, it was not worsened and in group 3, it was improved distinctly. Pre-occlusion hemodilution with fluorocarbon emulsion could also improve cardiac function following coronary occlusion. These results suggest that hemodilution with fluorocarbon emulsion has a beneficial effect on left ventricular diastolic function during myocardial ischemia.

Keywords: Fluorocarbon emulsion Heart function Myocardial ischemia

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