

عنوان مقاله:

Renoprotective potential of exogen erythropoietin on experimental ruptured abdominal aortic aneurysm model: An animal study

محل انتشار:

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خلاصه مقاله:

Objective(s): The aim of this study is to investigate the renoprotective effect of erythropoietin (EPO) on hypovolemic shock and ischemia/reperfusion (IR) injury on kidneys as end-organs in an experimentally-created ruptured abdominal aortic aneurysm (rAAA) model. **Materials and Methods:** Thirty anesthetized Sprague-Dawley male rats were randomized to sham ((Sh n:6) (Sh+EPO n:6)) or shock and I/R groups ((S/IR n:9) (S/IR+EPO n:9)). Additional surgical procedure except aortic exploration was not performed on Sh and Sh+EPO groups. 60 min of shock, 60 min of ischemia, and 120 min of reperfusion were applied on S/IR and S/IR+EPO groups. In the S/IR and S/IR+EPO groups, hemorrhagic shock, lower torso ischemia, and reperfusion were created. At the end of the shock period, saline solutions were separately and equally administered to Sh and S/IR groups, whereas 2000 U/kg EPO was intraperitoneally administered to Sh+EPO and S/IR+EPO groups. At the end of the experimental study, some biochemical and histological parameters were studied in serum and kidney tissues. **Results:** Biochemical parameters were all significantly increased in the S/IR group compared with the Sh group. These parameters were not statistically significantly different between S/IR+EPO and Sh+EPO groups. In histopathologic examination, EPO prevented high-grade injury. **Conclusion:** Our data indicate that EPO may have a renoprotective effect and reduce the systemic inflammatory response that resulted from shock and I/R in an experimental model of rAAA.

کلمات کلیدی:

Abdominal, Aneurysm, Aortic Aneurysm, Erythropoietin, Hypovolemic, Ischemia-reperfusion injury, Renoprotective effect, Ruptured, Shock

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