

عنوان مقاله:

?Does Ambroxol alleviate kidney ischemia-reperfusion injury in rats

محل انتشار:

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خلاصه مقاله:

Objective(s): Ischemia-reperfusion injury is a life-threatening clinical problem that can occur after transplantation or a number of clinical procedures. The purpose of the study was to investigate the effects of Ambroxol on kidney damage caused by experimentally induced ischemia-reperfusion injury in rats. Materials and Methods: Wistar albino rats were divided into 3 groups: Control (CTR, n=6), Kidney ischemia-reperfusion (K-IR, n=6), And kidney ischemia reperfusion+Ambroxol (K-IR+AMB, n=6). In K-IR+AMB group, Ambroxol (30 mg/kg) was administered orally 30 min before the ischemia period. K-IR and K-IR+AMB groups underwent 45 min of kidney ischemia followed by a 6-hour reperfusion period. At the end of the reperfusion period, blood and kidney tissue samples were collected after euthanasia. From the blood samples, BUN and creatinine levels were determined to assess kidney function, and TNF- α and IL-1 β concentrations were evaluated to determine inflammatory response. Results: While serum BUN, creatinine activities, and TNF- α and IL-1 β concentrations were higher in both IR groups compared with the CTR group, these values were found to be lower in the K-IR+AMB group compared with the K-IR group. Histopathological examination revealed that interstitial edema and desquamation of tubular cells in the K-IR group were more severe than in the K-IR+AMB group. Conclusion: Ambroxol treatment alleviated the production of pro-inflammatory cytokines and the harmful cellular effects in the tubular cells.

کلمات کلیدی:

Ambroxol, Distant organ effect, Kidney ischemia reperfusion, Pro-inflammatory cytokines, Rat

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