

عنوان مقاله:

Effects of lipopolysaccharide-induced septic shock on rat isolated kidney, possible role of nitric oxide and protein kinase C pathways

محل انتشار:

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نویسندگان:

Zahra Gholamnezhad - *Neurogenic Inflammation Research Center, Mashhad University of Medical Sciences, Mashhad, Iran*

Zahra Fatehi Hassanabad - *Emam zaman Hospital, Mashhad, Iran*

خلاصه مقاله:

Objective(s): Pathophysiology of sepsis-associated renal failure (one of the most common cause of death in intensive care units) had not been fully determined. The effect of nitric oxide and protein kinase C (PKC) pathways in isolated kidney of Lipopolysaccharide-treated (LPS) rats were investigated in this study. Materials and Methods: Vascular responsiveness to phenylephrine and acetylcholine in the presence and absence of a potent PKC inhibitor (chelerythrine) and nonspecific NO inhibitor (L-NAME) as well as responses to acetylcholine and sodium nitroprusside (SNP) were examined. Results: LPS (10 mg/kg, IP) treatment resulted in a lower systemic pressure and reduction of responses to vasoconstrictor and vasodilator agents (PConclusion: Present study highlighted that five hours of intraperitoneal endotoxin injection is adequate to reduce renal basal perfusion pressure. These results also suggest that PKC inhibition may have a beneficial role in vascular hyporesponsiveness induced by LPS. Although our study partly elaborated on the effects of LPS on isolated renal vascular responses to vasoactive agents, further studies are required to explain how LPS exerts its renal vascular effects

کلمات کلیدی:

Kidney, LPS, Nitric oxide, Protein kinase C, Rat, Vasoconstrictor, Vasodilator

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