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İVEK
İLAÇ, ECZACILIK, SAĞLIK BİLİM VE TEKNOLOJİLERİ VAKFI

3.

ULUSLARARASI

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BİLDİRİLER *Abstracts*

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Nephroprotective Effect Of Riboflavin In A Rat Model Of Acute Renal Injury

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Renal ischemia reperfusion (I/R) induced acute renal failure is an important clinical case in the present time, because of encountered frequently and high level of mortality [1,2]. In various clinical stiuations such as kidney transplantation, partial nephrectomy, trauma, sepsis and urological operations blood supply of kidney may interrupted and causes ischemia [3,4]. Paradoxically, reperfusion of isheamic tissues causes more damage like generation of reactive oxygen species and inflammatory response [1]. Compounds with antioxidant properties may be used to protect tissues from destructive effects of I/R injury. Riboflavin (vit B2) is a vitamin; essential, water-solubl which found in foods such as meat, milk and fish. Through the antioxidant properties it have been considered to be protective on brain, lung, liver and heart ischemia reperfusion injury [5]. This study was designed to investigate the protective effect of riboflavin on renal I/R injury. Wistar albino rats 200-300 g weighing were divided into 3 groups of 7 animals per group. Riboflavin (25 mg/kg, orally) or vehicle was administered for one week as pretreatment and then to induce I/R injury, rats were unilaterally nephrectomized and subjected to 45 minutes of renal pedicle occlusion followed by 6 hours of reperfusion. At the end of the experimental period animals were decapitated and kidney tissue samples were taken for the evaluation myeloperoxidase (MPO) activity and malondialdehyde (MDA) and glutathione (GSH) levels. Tissues were also examined histologically. I/R injury caused incraese in MDA levels and MPO activities in tissues, while GSH levels were found to be decreased. On the other hand riboflavin treatment reversed all these changes. The present data demonstrated that riboflavin, through its antioxidant effect, attenuates I/R induced acute renal injury in rats.

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