Role of propolis in histological changes of LPS induced renal damage

In recent years, propolis has been the object of extensive research for its antibacterial, anti-oxidant, anti-inflammatory, and anti-tumoral activities. This study aimed to determine the nephroprotective efficiency of propolis on experimental endotoxemic renal damage in rats. In the current study, fifty adult Sprague Dawley rats (weighing 200-300 g) were randomly divided into five groups of ten rats each. Normal saline solution was administered to the rats in the control group, while in the second group LPS (30 mg/kg), in the third group propolis (250 mg/kg), in the fourth group first propolis and then LPS (30 mg/kg), and in the fifth group, first LPS (30 mg/kg) and then propolis were given. Six hours after the application, histopathological changes in the kidney tissue samples were determined. Besides, MDA was analyzed as an oxidative stress marker. The results demonstrated that the application of propolis prior to LPS administration did not have a significant protective effect against LPS-induced renal damage. In comparison with the kidney sections of rats treated with only LPS, administration of propolis showed a mild but not a significant effect against LPS-induced renal damage.

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