



## Protective effect of *Asphodelus aestivus* Brot. on bladder injury due to ischemia- reperfusion: Biochemical and histopathological Study

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Severe oxidative stress caused by reperfusion after ischemia in the bladder causes serious functional and structural damage. New molecules with antioxidant effects are needed to protect against this damage. In our study, we aimed to investigate the effect of *Asphodelus aestivus* on the oxidant-antioxidant system in bladder ischemia/reperfusion (I/R) injury induced in rats biochemically and histopathologically. In our study, 24 three-month-old male Wistar-Albino rats weighing 250-300 g were randomly divided into 3 groups of 8 rats each: sham group (I/R+serum physiological, 1mL) (group 1), I/R group (group 2), I/R+A. *aestivus* group (50 mg/kg/day) (treatment group, group 3). At the end of the experiment, all rats were sacrificed and their bladder tissues were taken and divided into 2 parts for biochemical and histopathological examination. Protein amount, malondialdehyde (MDA) levels and superoxide dismutase (SOD) and catalase (CAT) enzyme activity levels were measured spectrophotometrically, and histopathological examination was performed under a light microscope. MDA levels were significantly higher and CAT activity was significantly lower in the I/R group compared to the sham and treatment groups ( $P<0.05$ ). In histopathological examination, it was determined that there was a significant regression and/or decrease in the findings caused by I/R injury in the group treated with *A. aestivus*. *A. aestivus* has a protective effect in reducing oxidative stress in bladder I/R injury.

**Keywords:** Antioxidant, Catalase, Malondialdehyde, Oxidative stress, Superoxide dismutase