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SHC 35 . THE PROTECTIVE ROLE OF ERDOSTEINE AGAINST CYCLOSPORINE A-INDUCED TESTICULAR TOXICITY

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The use of Cyclosporine A (CsA) in cancer is increasing based on its inhibiting effect on the calcineurin/nuclear factor of activated T-cells (NFAT) pathway in immune cells. However, its oxidative stress related toxic side effects reduces its therapeutic potential. Therefore, the protective effect of Erdosteine (ER) against CsA-induced injury in rat testis was firstly investigated in the present study. 32 Wistar albino male rats were randomly divided into four groups; control, CsA (20 mg/kg/day i.p.), CsA + ER (ER 12 mg/kg/day orally) and only ER. Malondialdehyde (MDA), catalase (CAT), nitrite/nitrate (expressed as NO), superoxide dismutase (SOD) and glutathion peroxidase (GSH-Px) levels were evaluated in addition to histological analysis. MDA and NO levels were significantly increased in CsA group compared to control group. However, MDA and NO levels significantly decreased in CsA + ER groups compared to CsA group ($p < 0,05$). Antioxidant enzymes CAT and GSH-Px activities in CsA group were significantly lower than control group, while CAT activities in CsA + ER were significantly lower than other groups ($p<0,05$). Histological degeneration in CsA group was significant compared to other groups. Improvement in ER + CsA group was significant compared to CsA group. In conclusion ER could have a protective role against testicular injury induced by CsA with its antioxidant properties.

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