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Protective effect of *Hypericum triquetrifolium* Turra on cyclophosphamide induced hepatotoxicity in rat

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Hypericum triquetrifolium Turra. (HT) is a phenolic component with anti-oxidative, analgesic and anti-carcinogenic properties. This study aimed to investigate the possible protective effect of HT on CP-induced hepatotoxicity. In order to determine the protective effect of HT upon the liver, the levels of Aspartate transaminase (AST), Alanine transaminase (ALT), Alkaline phosphatase (ALP) and Lactate dehydrogenase (LDH) as well as the total levels of Total Anti-oxidant Capacity (TAC) and Total Oxidant Capacity (TOC), were determined. Also, Oxidative Stress Index (OSI) was measured. Furthermore, the liver tissues were analyzed histologically. Albino rats (Wistar, 3-4 months old, male, weight 220 ± 20 g healthy) were randomly divided in 9 nine groups, each including 7 animals: Group 1 (control) treated with saline, Group 2 treated with 150 mg/kg CP, Group 3, 4 and 5 treated with 25, 50 and 100 mg/kg HT respectively, Groups 6, 7 and 8 treated with 25, 50 or 100 mg/kg HT+CP respectively, and Group 9 treated with 0.5 ml of %0.2 DMSO. The results were analyzed by One Way Analysis of Variance and Kruskal-Wallis One Way Analysis of Variance on Ranks Test. Our study demonstrated that in line with the rise in the dose of 150 mg CP, we determined an increase in the levels of serum ALT, AST, ALP, LDH, TOS and OSI, besides degeneration in the liver tissue. With 25, 50 and 100 mg/kg HT, there was an important decrease with respect to CP toxicity. In the groups given both CP plus HT, there was a rise in serum Total Anti-Oxidant Status (TAS) levels, while the levels of AST, ALT, ALP, LDH, TOS and OSI showed a remarkable decrease. The signs of recovery in the serum biochemical levels were also true for the histological findings of the liver. Our data suggest that HT is a highly effective antioxidant substance with a cell-protecting effect. Therefore, HT could serve as effective agent that could lessen the adverse effects of anti-cancer drugs in the course of chemotherapy protocols.

Biography

Songul Cetik has successfully completed her Master's and PhD from Eskisehir Osmangazi University in 2011 & 2014 respectively. She studies on topic: Phytotherapy on Side Effects of Chemotherapy (Toxicology). She is working as Assistant Professor in the Vocational Higher of Health Services unit.

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