

Effect of bhringaraja chooranam and vitamin C on cyclophosphamide-induced toxicities in wistar rats

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Cyclophosphamide (CP) is an alkylating agent that has been considered effective for cancer treatment. It has severe adverse effects which include bone marrow suppression, alopecia, thinning of hair and weight loss. Bhringaraja chooranam (BC) is an ayurvedic formulation of nine different plants having medicinal properties. Being a herbal drug, BC has high efficacy with no side effects. Moreover, vitamin C is well known for its antioxidant activity, acting as a reducing agent to lessen oxidative stress. The goal of this study is to evaluate the combined effect of bhringaraja chooranam and vitamin C (BCC) in inhibiting the toxic effect of CP in Wistar rats. Rats were given BC (100 mg/kg b.w.) and vitamin C (50 mg/kg b.w.) by oral gavage, daily for 30 days. On day 21 and 22, CP was administered to appropriate group of rats in a dose of 100 mg/kg b.w. intraperitoneally. On 31st day, animals were sacrificed and the blood samples were collected for hematological analysis. Significant changes were observed in the levels of RBC, hemoglobin, WBC, platelets, lymphocyte and monocyte during CP intoxication and moderate attenuation was found in BCC treatment. No significant alterations were found in MCV, MCH and MCHC. These results demonstrated that the BCC showed a modulation in CP toxicity and provided moderate protection against CP-induced hematological toxicities. However, further works are warranted to support the study.