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Immunomodulatory effect of *Withania somnifera* (ashwagandha) on cyclophosphamide induced toxicity in rats

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Abstract

Cyclophosphamide is used alone for the treatment of several types of cancers but often in combination with other drugs to treat breast cancer, leukemia and ovarian cancer or tumor but cyclophosphamide reduces the production of blood cells from the bone marrow.

In the present investigation to combat the toxicity of cyclophosphamide, aqueous extract of immunomodulator plant like Ashwagandha was studied against toxicity of cyclophosphamide. After administration of cyclophosphamide @ 250 mg/kg b.w. orally by gastric intubation method to rats marked reduction in total count of WBC, RBC and Platelets were observed on day 4. When Ashwagandha (**300mg/kg b.w.**) administered five days prior to cyclophosphamide administration and continued for ten days then significant increase in total count of WBC, RBC and Platelets were observed after treatment. Thus findings of present investigation showed that therapeutic potency of Ashwagandha ameliorate the toxicity produced during cancer chemotherapy by mitigating the bone marrow depression.

Keywords: Cyclophosphamide, Ashwagandha, Rats, RBC, WBC & Platelets.

Biography

Dr.Mohammad Ali has done his PhD degree in Zoology in 2009 and working in Mahavir Cancer Institute & Research Centre,Patna (India) as a Scientist. He has published several research papers in National & International Journals and he is interested in studying pesticide effect on male reproductive organs and plants having anticancer property.