

AMELIORATING EFFECT OF CURCUMIN ON LINDANE-INDUCED HEMATOTOXICITY IN WISTAR RATS

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Abstract

Pesticides are common environmental contaminants incorporating in the food chain due to their indiscriminate use and persistence. The Bioaccumulation of lindane (organochlorine pesticide) is a major threat to human health. We are looking for phytochemicals which may enhance its metabolism and excretion. The ameliorating effect of curcumin (Phenolic phytochemical obtained from turmeric) against lindane induced hematotoxicity was studied in wistar rats. Lindane (30mg/kg bw) exposure significantly ($P < 0.001$) decreases the level of Hb, RBC, lymphocytes, mixed cells (eosinophils, basophils, monocytes), PCV and ESR, significantly ($P < 0.001$) increases WBC and neutrophils as compared to control. Pre and post-treatment with curcumin (100 mg/kg bw) ameliorated lindane induced hematotoxicity. However, curcumin co-administered with lindane did not show any ameliorating effect. Lindane hematotoxicity persisted after 14 days of metabolism indicating its persistence.

Keywords

Lindane, Toxicity, Amelioration, Wistar Rat, Curcumin

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