

Protective Efficacy of Curcuma Aromatica Leaf Extract on Liver of Arsenic Intoxicated Albino Rats

Authors : Priya Bajaj, Baby Tabassum

Abstract : Arsenic is a poisonous metalloid, naturally occurring in soil, air, rocks and ground water. This dreadful metalloid commonly exists as inorganic compound, arsenic trioxide. WHO permitted maximum limit for arsenic in water is 0.01 mg/L, but some affected areas show ground water level of arsenic up to 3 mg/L even. Ground water arsenic pollution has created a number of health problems, viz. keratosis, melanosis, lesions and even skin cancers. The key objective of our nested study was to characterize arsenic induced hepatotoxicity and to find out some herbal protection against it. For the purpose, we selected albino rat (*Rattus norvegicus*) as model for arsenic induced liver injury and wild turmeric (*Curcuma aromatica*) leaf extract as remedy for it. The study was performed at acute (1 day) and subacute (7, 14 & 21 days) levels. The LD50 estimated for arsenic trioxide was 14.98 mg/kg body weight. In our investigation, we observed a significant restoration of altered hepatic lipid, cholesterol, protein and glycogen contents as well as liver weight, body-weight and hepato-somatic index by *Curcuma aromatica* leaf extract before arsenic intoxication. The results reveal excellent protective efficacy of *Curcuma aromatica* leaf extract that further can be exploited in remediation programme in heavy metal affected areas.

Keywords : arsenic, *Curcuma aromatica*, glycogen, lipids

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