

عنوان مقاله:

Chemopreventive effects of *Costus comosus* Linn against diethylnitrosamine-induced hepatocellular carcinoma in rats

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خلاصه مقاله:

Introduction: *Costus comosus* is a potential medicinal plant used traditionally to treat various ailments. The present study aimed to evaluate antioxidant status, lipid peroxidation, and the ameliorative effect of its ethanolic leaf extract against diethylnitrosamine (DEN)-induced hepatocellular carcinoma (HCC) in rats. Methods: HCC was induced by 0.01 % v/v DEN through the drinking water for 16 weeks. The animals were treated with ethanolic leaf extract of *C. comosus* (EECC) at 200 and 400 mg/kg for 16 weeks. In this study, tumour incidence, tumour volume, tumour burden, lipid peroxidation, antioxidant activity, liver marker enzymes, and histological responses were measured in the animals. At the end of the study, rats were sacrificed, their livers were removed and the levels of antioxidant enzymes were measured in the liver homogenate. Results: In DEN-treated animals, there were 100% tumour occurrences probably due to an imbalance in carcinogen metabolizing enzymes and cellular redox state. The oral administration of ethanolic leaf extract of *C. comosus* therapy at a dose of 200 and 400 mg/kg reduced lipid peroxide levels and restored the increased activities of liver marker enzymes and antioxidant status to near normal. The biochemical findings corroborate histological findings, indicating that the leaf extract has a significant hepatoprotective impact in a dose-dependent manner. Conclusion: The results of the present study showed the promising anti-carcinogenic effects of .ethanolic leaf extract of *C. comosus* against the DEN-induced HCC in rats

کلمات کلیدی:

Hyperlipidemia, Oxidative stress, Diethylnitrosamine, Cancer, Chemoprevention

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