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التأثيرات الوقائية لاستهلاك الشاي الأخضر والأسود على وظيفة كبد الجرذان

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Abstract : Today, next to water, tea is the second most widely consumed beverage in the world. Although attention has long been drawn to potentially beneficial effects of tea, there are inconsistencies in the relationship between consumption of tea and the risk of some diseases. We conducted an in vivo experiment to predict whether green tea or black tea might exert some preventive effect on galactosamine (GalN)-induced liver injury. Hepatotoxic parameters, such as aminotransferases and γ -glutamyl transferase, subsequently examined. However, hepatotoxicity has a relation with lipid metabolism, therefore, we investigated the influence of tea consumption on lipid profile. Moreover, serum glucose levels and some performance parameters were determined. 90 male Wistar rats were divided into three groups of 30 rats. All received the same basic diet and each group drank either water, 2% green tea or 2% black tea, as the sole drinking fluid. Then after a period of 4 weeks, each group was divided into two groups, one of them (treated group) was injected with galactosamine intraperitoneally at a dose of 350 mg/kg body weight, while the other group was injected with saline (untreated group). Green tea and black tea pretreatment was effective in significantly suppressing the elevation of serum aminotransferases activities caused by GalN administration, suggesting that green and black tea intake could protect against hepatic injury induced by GalN. Furthermore, the hepato-protective activity was markedly observed in the green tea group. A marked reduction in serum triglyceride levels was noted in response to GalN administration in all groups as compared with untreated groups. This reduction could be an evidence of liver injury. Hypocholesterolemic effect and a higher HDL-C: LDL-C ratio was recorded for untreated animals drinking black tea as compared to those drinking green tea. These findings indicate that black tea could contribute to protection against cardiovascular disease. Moreover, both types of tea tested had a hypoglycemic effect which was observed in GalN-treated groups and untreated groups.

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