Taurine prevents ethanol-induced alterations in lipids and ATPases in rat tissues

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Abstract:
The study investigates the cytoprotective effect of taurine on ethanol-induced alterations in lipids and enzymes involved in ion-transport in rat tissues. Male albino rats were divided into 4 groups (n = 8) and maintained for 28 days as follows: control group, ethanol (6 g/kg/day) group, ethanol plus taurine (10 g/kg diet/day) group and control plus taurine group. Ethanol administration caused significant increases in the lipids in plasma and tissues, such as liver, kidney and brain, together with reductions in the activities of ATPases in tissues as compared to control animals. Histological studies revealed lipid accumulation and inflammatory cell infiltrates in the liver and kidney while edematous changes were observed in the brain. Simultaneous administration of taurine along with alcohol attenuated the rise in lipid levels and normalized ATPase activities. Histological changes were alleviated on treatment with taurine. The study suggests a bioprotective effect of taurine in ethanol intoxication.

Key words:
ATPases, ethanol, lipids, taurine