

The Antioxidant Effect of *Camellia Sinesis* on the Liver Damage Induced by *Tioacetamide* in Male Mice

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Abstract

Background and Objective: Flavonoids play an important role in non-enzymatic reaction against oxidative stress. These are polyphenolic compounds in tea structure that could be reacted with free radicals and neutralized them. In this study, we investigated the anti-oxidant impact of *Camellia Sinesis* on the liver of thioacetamide -injected male albino mice.

Material and Methods: In this study, 40 male mice were categorized in five groups of eight. The first group was control. The second and the third group received 100mg/kg and 150mg/kg of thioacetamide, respectively. The fourth group received 100mg/kg thioacetamide followed by black tea (5 gr/100) and the fifth one received 150mg/kg thioacetamide followed by black tea (5 gr/100). Thioacetamide was given via intraperitoneal. After that, for 30 days, they were only fed on black tea (5 gr/100). At the end, catalase (CAT) and glutathione peroxidase (GPx) activity were measured.

Results: Based on the results, catalase(CAT) and glutathione peroxidase(GPx) activity were significantly increased in the groups of Thioacetamide and black tea compared to those of only Thioacetamide groups ($p<0.05$).

Conclusion: The increase of these enzymes in tea groups shows the anti-oxidant effect of black tea that can be caused by Catechin.

Keywords: Antioxidant; Thioacetamide; Black Tea; Glutathione Peroxidase; Catalase