



## Protective Effects of Selenopyran Against Carbon Tetrachloride Hepatotoxicity in Rats

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Carbon tetrachloride (CCl<sub>4</sub>) is a known hepatotoxic compound working through the generation of reactive free radicals. Selenium (Se) is an essential trace element required by animals and humans for protection against xenobiotic compounds. In this study, Se, as selenopyran, has been evaluated for its protective action against CCl<sub>4</sub>-induced hepatotoxicity in Wistar rats.

CCl<sub>4</sub> exerts its toxic effects by generation of free radicals; it was intraperitoneally administered to male Wistar rats (2g/kg body weight) 24 h before the animals were decapitated. Selenopyran (2mg/kg body weight) was administered intragastrically one month before CCl<sub>4</sub> injection. Rats injected with CCl<sub>4</sub> alone showed significant lipid and hydropic dystrophy of liver, massive necrosis of hepatocytes, increases in free and conjugated bilirubin levels were marked as well as elevation of hepatic enzymes (alanine aminotransferase and aspartate aminotransferase) in plasma. Selenopyran administered at a pharmacological dose diminished the toxic effects of CCl<sub>4</sub>. Thus it decreased both the structural and functional injury of hepatocytes and clearly exerted hepatoprotective effects. These findings suggest that the effect of selenopyran on CCl<sub>4</sub>-induced acute liver injury depends on the antioxidant action Se.

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