Paper # (٤)

Hepatoprotective effects of Zamzam water against carbon tetrachloride induced liver damage in rats: biochemical, histopathological, and molecular evidences.

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Summary:

Alkaline water have been claimed to boost hepatoprotective effect. Thus, this study aimed t investigate if Zamzam water (ZW), that is similarly alkaline, can promote hepatoprotectiv effect. Hepatoprotective properties of ZW were investigated in a rat model of liver injur induced by carbon tetrachloride (CCl٤). Carbon tetrachloride was used as a hepatotoxic agen while, ZW were used as a probable hepatoprotective agent. ٢٤ rats were divided into four mai groups. Group I, served as normal control, Group II served as liver injured group treated onl with CCl٤, Group III served as ZW control, and Group IV served as liver recovery group treated with CCl٤ and drinking ZW. Various biochemical parameters supported b histopathology of liver sections were studied to evaluate the hepatoprotective activity of ZW The study was also supported for the first time in case of ZW evaluation effects by using o DNA extraction of the rats' livers to investigate the genomic DNA integrity. Results revealed that the serum biomarkers in carbon tetrachloride treated rats recorded elevated concentratio indicating severe hepatic damage by carbon tetrachloride. The results of the serum biomarker of "ZW treated rats" showed significant reduction indicating the effect of ZW in restoring th normal structural and functional ability of the hepatocytes. Both the molecular an histopathological results showed protective effect in the experimental model of hepati alterations of rats, and suggests the use of ZW as a hepato-protective agent in the diet o patients with hepatic illness.