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Biochemical Study of Hepatoprotective Impact of Aloe Vera Via Overdose of Paracetamol in Albino Rats

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ABSTRACT Aloe Vera is an evergreen perennial plant species of the genus Aloe, it is cultivated in the Arabian Peninsula but germinates wild in equatorial climates around the world and is implanted for agricultural and medicinal uses. This study aimed to demonstrate the hepatoprotective impact of Aloe vera extract against paracetamol [PCT] in albino rats. Hepatotoxicity was induced in rats by gastric intubation of 500 mg/kg b.wt /day for 4 weeks. These rats were orally administered with Aloe vera extract at dosage of 500 mg/kg b.wt /day for 6 weeks. The treatment with Aloe vera remarkably improved the deleterious effect of PCT on oxidative stress and antioxidant defense system. That was reflected by increase of glutathione and deficiency in lipid peroxidation and catalase. The pro-inflammatory cytokine, TNF- α , and tumor marker, AFP, levels exhibited a marked increase in serum of PCT-administered rats comparable to the normal ones. The treatment of PCT-administration rats with Aloe vera caused marked amelioration of these estimated variables. In conclusion, Aloe vera extracts attenuate hepatotoxicity of Paracetamol by decreasing oxidative stress and reducing liver injury.

Keywords: Acetaminophen, Oxidative stress, Antioxidant, Hepatotoxicity, Hepatoprotective effect, Aloe Vera