

ABSTRACT

Objectives: The study was designed to evaluate the hepatoprotective activity of *Fumaria officinalis* in experimental liver injury induced by Carbon tetrachloride. **Method:** The hepatoprotective activity of *Fumaria officinalis* was studied in Carbon tetrachloride induced liver toxicity. The liver damage was produced by once daily administration of CCl₄ for one week and the level of SGPT, SGOT, Bilirubin (total and direct), Cholesterol, Triglycerides were estimated in Serum. Histopathological studies and Ascorbic acid estimation was also done to confirm the hepatocyte changes. **Results:** In the liver damage induced by Carbon tetrachloride, ethanolic extract of *Fumaria officinalis* (100, 200, 500 mg/kg, po) significantly reduced the elevated serum level of SGPT, SGOT, alkaline phosphatase, bilirubin, cholesterol and triglycerides compared to CCl₄ treated control group. The dose of the extract (100, 200, 500 mg/kg, po) prevented decrease in the excretion of ascorbic acid in rats urine due to the liver damage produced by Carbon tetrachloride, while the higher dose was produced more significant response. Histopathological examination of the liver tissues supported the hepatoprotection. The potency of the ethanolic extract of aerial part of *Fumaria officinalis* was compared with that of the reference standard, Silymarin (100 mg/kg). Significant hepatoprotective activity was found to be at the dose of 500 mg/kg body weight. **Conclusion:** It was concluded that treatment with ethanolic extract of *Fumaria officinalis* enhances the recovery from CCl₄ induced hepatotoxicity and the activity could be attributed to the preservation of structural integrity of cell membrane of hepatocyte and maintaining normal functions of liver and possesses hepatoprotective activity.

Key words: Carbon tetrachloride; *Fumaria officinalis*; Hepatoprotective activity; Ascorbic acid; Biochemical parameters.