COMPARATIVE HISTOPATHOLOGICAL EVALUATION OF TWO DIFFERENT EXTRACTS OF CRATAEVA RELIGIOSA AGAINST PARACETAMOL INDUCED LIVER DAMAGE IN WISTAR RATS

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Hepatoprotective effect of aqueous and ethanolic extracts of Crataeva religiosa on liver pathology was studied in paracetamol induced hepatotoxicity in rats and their effects were compared with the standard drug, silymarin.

Hepatotoxicity was produced in the animals with an oral acute toxic dose of paracetamol at 3 g/kg b.w. The animals were treated with the standard and test drugs for a period of seven days. Standard drug silymarin was administered at the dose rate of 100 mg/kg b.w. Test drugs such as aqueous and ethanolic extracts of C. religiosa were tested for their hepatoprotective action in two different doses viz. 200 and 400 mg/kg b.w. On the 9th day, animals were sacrificed and the livers of all the animals were excised and were collected in 10 per cent neutral buffered formalin for histopathological studies.

Histopathology of paracetamol intoxicated livers revealed toxic changes such as diffuse degenerative changes, centrilobular necrosis and ballooning degeneration. The livers of animals treated with silymarin and extracts of C. religiosa showed restoration in liver architecture as evidenced by the histopathology. The ethanolic extract at the dose of 400 mg/kg b.w. produced better effect than all other treatments in restoring the altered liver pathology.

The hepatoprotective potential of aqueous and ethanolic extracts of C. religiosa at two different doses was studied in paracetamol induced hepatotoxicity model in rats. Both the extracts exhibited significant effect in restoring the altered liver pathology. However, ethanolic extract at 400 mg/kg b.w. produced maximal effect than all other extracts in restoring the liver histopathology which was comparable to the standard drug, silymarin.

Keywords: Crataeva religiosa, paracetamol, hepatotoxicity, histopathology.