

Hepatoprotective effect of poly herbal formulation against various hepatotoxic agents in rats

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ABSTRACT

Background Individually *Andrographis paniculata* Nees. (Acanthaceae), *Phyllanthus niruri* Linn. (Euphorbiaceae) and *Phyllanthus emblica* Linn. single plant extracts have been reported to have hepatoprotective activity. However, literature survey shows that no sufficient scientific data has been published on pharmacological evaluation of these plants in combined form. **Method** Hepatoprotective activity of the polyherbal hepatoprotective formulation (PHF)-containing spray-dried aqueous extracts of *Andrographis paniculata* Nees. (Acanthaceae), *Phyllanthus niruri* Linn. (Euphorbiaceae) and *Phyllanthus emblica* Linn. (Euphorbiaceae), was screened against paracetamol, carbon tetrachloride (CCl₄), and ethanol-induced hepatic damage in rats. PHF was evaluated by measuring levels of serum marker enzymes like SGOT, SGPT, ALP, direct bilirubin (DB), and lactate dehydrogenase (LDH). The histological studies were also studied support the biochemical parameters. Silymarin was used as standard drug. **Results** Administration of PHF (100 and 200 mg/kg p.o.) significantly inhibited paracetamol, CCl₄ and ethanol-induced elevation levels of SGPT, SGOT, ALP, DB and LDH. A comparative histopathological study of liver exhibited almost normal architecture as compared to toxicant group. **Conclusion** Results suggest that the hepatoprotective effects of PHF might be useful for liver protection due to combined action of all plant extracts along with their phytoconstituents.

KEYWORDS

Andrographis paniculata Nees . carbon tetrachloride . hepatoprotective activity . Marker enzymes . paracetamol . *Phyllanthus niruri* Linn

REFERENCES