

Phytochemical Screening and Hepatotoxic Effect of Datura metel Linn. Aqueous Seed Extract in Albino Wistar Rats

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Abstract : The phytochemical screening and hepatotoxic effect of Datura metel aqueous seeds extract in Albino Wistar rats were evaluated. Phytochemicals were screened using standard methods. The enzymes activity and liver function indices were also determined using standard methods of analysis. The phytochemicals screening revealed the presence of alkaloid, tannin, glycoside and flavonoid. The organ-body weight decreased significantly ($P < 0.05$) at all the doses of the extract treated groups compared to the control. The activity of alkaline phosphatase decreased significantly ($P < 0.05$) in the liver and increased significantly in the serum at all the doses of the extract treated groups compared to the control. The activity of serum alanine transaminase increased significantly ($P < 0.05$) while there is no significant difference ($P > 0.05$) in the activity liver alanine transaminase at all the doses of the extract treated groups compared to the control. The result also revealed significant increase ($P < 0.05$) in the aspartate transaminase activity in both liver and serum at all doses of the extract treated groups compared to the control. Serum total protein, albumin, globulin, and total bilirubin concentration decreased significantly ($P < 0.05$), while direct bilirubin concentration increased significantly ($P < 0.05$) at all the doses of the extract treated groups compared to the control. The present study therefore revealed that, the present of some phytochemicals in the plant extract attributed the plant to its hepatotoxic effects as revealed in the alteration of marker enzymes and some liver function indices analyzed.

Keywords : datura metel, transaminases, hepatotoxic effect, phytochemicals, rats

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