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Synergetic effects of *Achyranthes bidentata* and *Verbascum thapsus* in alloxan induced diabetic albino mice

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Statement of Problem & Aim: The available pharmacological agents possess several undesirable side effects on diabetes. Due to fewer side effects and more effectiveness the demand of herbal medicine has been elevated for this chronic disorder. Hence, current study aimed to evaluate the synergetic activity of *Achyranthes bidentata* and *Verbascum thapsus* in alloxan induced diabetic albino mice.

Methodology: Plant's extracts were orally administered to male albino mice. Alloxan monohydrate was used to induce diabetes. Overnight fasting mice blood sugar level and body weight were calculated on weekly intervals for up to 5 weeks. Other parameters i.e. lipid, liver and renal profiles were monitored after oral administration of extracts for 35 days.

Findings: Daily oral administration of *Achyranthes bidentata* (300 mg/kg), *Verbascum thapsus* (300 mg/kg) and combined extracts dose (600 mg/kg) significantly ($p>0.05$) decreased the fasting blood glucose level besides significantly improved body weight, lipid profile, liver and kidney function and consequently, controlled diabetes after 35 days treatment. *Achyranthes bidentata* was found more effective than *Verbascum thapsus*, while results of combined extract dose (600 mg/kg), were highly significant ($p>0.001$).

Conclusion & Significance: *Achyranthes bidentata, Verbascum thapsus* and their combined extracts possess antidiabetic and antihyperlipidemic property and proved to be effective to improve body weight, liver and kidney function. Whereas, the synergetic treatment of both extracts was proved comparatively more effective. Present investigation will contribute to the therapeutic exploitation of the natural resources against deadly chronic disorder and will open a new avenue for pharmaceutical industry.

Biography

Sadia Tabassum has received her PhD in Human Genetics and presently, she is working as an Assistant Professor in Department of Zoology, Hazara University, Pakistan. She is working on several projects regarding women health care. Currently, her basic focus is on Polycystic Ovarian Syndrome (PCOS) and Diabetes in female population of Pakistan, where she is intended to devise a valid diagnostic marker for PCOS and related insulin resistance in addition to the treatment of diabetes.

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