THE EFFECT OF VERNONIA AMYGDALINA AND OCIMUM GRATISSIMUM ON ALLOXAN-INDUCED DIABETIC RATS

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ABSTRACT
Aim: Anti-diabetic evaluation of Vernonia amygdalina and Ocimum gratissimum on alloxan induced diabetic rats was investigated.
Methods: Thirty rats were divided into six groups of five per group. The rats were fed with aqueous and ethanolic plant extracts of the plants.
Results: On day 2 post induction, fasting blood glucose of all the animals across the groups increased significantly (P<0.05) compared to pre induction across all the six groups for both water extract and ethanolic extract treated groups. On day 8 post induction (ethanolic extract), O. gratissimum had the lowest fasting blood glucose of 81 (±10.02) mg/dl when compared to other test groups while the highest fasting blood glucose of 600 (±0.00) mg/dl was observed in alloxan only group. On day 8 post induction (water extract) the control group, glibenclamide group, O. gratissimum group, all recorded reduced fasting blood glucose level of 98 (±6.35) mg/dl, 98.33 (±7.27) mg/dl, 105.67 (±10.02) mg/dl, 305.67 (±68) mg/dl respectively compared to values obtained on day 6 post induction. A drastic reduction in body weight of animals in groups treated with V. amygdalina, combined extract, glibenclamide and alloxan only can be observed (for both ethanolic and water extract treated groups). Out of all the extracts used, the extract of O. gratissimum significantly reduced the fasting blood glucose and increased the body weight of the rats at the end of the experiment.
Conclusion: O. gratissimum can be used to reduce elevated blood glucose of diabetic animals, and it proved to be more potent than V. amygdalina.

Key words: Ocimum gratissimum, Vernonia amygdalina, Alloxan, Glibenclamide