EFFECTS OF ORAL ADMINISTRATION OF LEAF EXTRACT OF 

UVARIA CHAMAE (MMIMI OQUIA) IN ALBINO WISTAR RATS

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**ABSTRACT**

*Uvaria chamae* P. Beauv. is known to have various medicinal and therapeutic properties. The biochemical and toxicological effects of the leaf extract were assessed in this study using Albino wistar rats. Acute toxicity test was performed on the rats to determine the LD50. Sub acute toxicity test was also carried out by oral administration of different doses of ethanolic extract of *U. chamae* leaf (EEUC) on different groups of rats for thirty (30) days. Twenty (20) male albino wistar rats were divided into four (4) groups A to D (n=5). Animals in group A served as control and received 5% tween 80. Then those in groups B, C and D received 250, 500 and 1000mg/kg of the extract. On the thirty first (31st) day, 5ml of blood was collected from the animals into plain tubes for biochemical investigations. Result of acute toxicity studies showed that leaf extract of *Chamae* had no toxic effect. Administration of the extract resulted in an increase in the mean alkaline phosphatase (ALP) levels in the treated groups B (490.00 ± 38.00), C (630.00 ± 60.00), D (370.00 ± 20.00) when compared with the control A (350.00 ± 11.00). Rats in group B (250mg/kg EEUC), C (500mg/kg EEUC), and D (1000mg/kg EEUC) had mean urea values of 3.80 ± 0.31, 3.30 ± 0.28 and 3.50 ± 0.18mg/dl respectively and these were significantly lower than the mean urea value of the control 5.00 ± 0.19mg/dl (p<0.05). However, alanine transaminase obtained for B (56.00 ± 1.90iu/l) were not significantly different from 56.00 ± 5.20iu/l obtained for the control (p>0.05). Similarly, there were no significant differences in aspartate transaminase values of group B (70.00 ± 7.30), C (64.00 ± 3.10) and D (78.00 ± 5.20iu/l) when compared with the control of group A (76.00 ± 6.70iu/l) (p>0.05). Rats in the treated groups B (71.00 ± 5.85mg/dl), C (81.00 ± 4.20mg/dl) and D (64.00 ± 6.70mg/dl) had no significant increase in their creatinine levels when compared with the control (77.00 ± 4.30mg/dl) (p>0.05). Sodium levels obtained were 140.00 ± 0.68, 140.00 ± 0.85 and 140.00 ± 1.50mmol/l for groups B, C and D respectively and these were not significantly different from 140 ± 2.00mmol/L obtained for the control (p>0.05). The chloride levels of groups B (110.00 ± 0.31; C (110.00 ± 0.52) and D (110.00 ± 1.60mmol/l) were not significantly increased when compared with the control (110.00 ± 2.90mmol) (P>0.05). The mean potassium and bicarbonate levels of the extract treated groups were not significantly different compared with control group (p>0.05). Phytochemical analysis of the ethanolic leaf extract of *Uvaria chamae* revealed the presence of alkaloids, flavonoids, resins, proteins, reducing sugars and terpenoids. The histological profile of the liver and kidney of control animals showed normal morphological patterns of hepatocytes, renal corpuscles, and tubules. In the treated groups, there was no adverse effect on kidneys. However, the liver showed evidence of mild periportal lymphocytic infiltration at concentrations of 250mg/kg, 500mg/kg and 1000mg/kg of the extract. The ethanolic leaf extract of *Uvaria Chamae* has a mild effect on the liver of albino wistar rats at low doses; hence it is safe for use in traditional medicine.