

Antiobesity and lipid lowering activitiy of *Vigna unguiculata* (L) Walp. seed in high fat diet induced obese mice

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Abstract:

Seed of *Vigna unguiculata* is commonly used as culinary in Bangladesh and many parts of the world. Besides this, seed of *Vigna unguiculata* possesses some medicinal values like antioxidant. In this study, seeds of *Vigna unguiculata* was used to determine anti-obesity and lipid lowering activity. Phytochemicals presents in the seed were evaluated. Total phenolic content (TPC) was determined using folin-ciocalteu method. High fat diet induced obese mice were used for anti-obesity and antihyperlipidemic test. Body weight gain, total cholesterol, triglyceride level were analyzed. Preliminary phytochemical screening showed that amino acid, phenol, alkaloid and terpenes were very strongly present in cowpea seed, while carbohydrate, cardiac glycoside was moderately present. *V. unguiculata* seed showed significant total phenolic content with a value of 119.716mg of GAE/gm equivalent. Cowpea seed with a dose of 400mg/kg body-weight, showed significant reduction in body weight gain when treated with fat diet compared with normal diet. Cowpea also capable of lowering the serum cholesterol ($p<0.01$) and serum triglyceride level ($p<0.01$) more significantly in high fat diet induced obesity. *V. unguiculata* seeds have total phenolic content significantly and other phytochemicals moderately. It has anti-obesity activity that can interfere with serum cholesterol and triglyceride metabolism. So, it seems like a healthy diet for the management of obesity and other heart related disease.

Key words: Antihyperlipidemia, *Vigna unguiculata(Cowpea)*, Total phenolic content, Cholesterol, Triglyceride

Recent Publications

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Biography

I have successfully completed my M. Pharm at the age of 25 years from Noakhali Science and Technology University with first position, I also completed my Bachelor of Pharmacy degree from this same institution with first position too. Presently I am working as a Lecturer of Pharmacy department of Atish Dipankar University of Science and Technology. I have published more than 15 papers in reputed journals and have been serving as an editorial board member of American Journal of plant science.

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