ABSTRACT

Background- Diabetes Mellitus is a chronic metabolic disorder which may lead to various complications, the important being dyslipidemia leading to Coronary Heart Disorders (CHD), the major cause for morbidity and mortality in diabetic patients. Diabetes Mellitus could be treated by nutritional therapy/drug therapy and others. But the drug therapy would have its own limitations and side effects. To overcome from this an herbal extract is recommended, such as Diallyl Disulphide (DADS) a principle compound of Garlic oil.

Aim- To assess the hypolipidemic effect of Diallyl Disulphide (DADS) in alloxan induced diabetic rats.

Materials and Methods- Healthy adult Wistar strain male albino rats weighing around 200-250 grams were randomly selected from the animal house at BLDE University’s Shri B.M.Patil Medical College, Hospital and Research Centre, Vijaypur, India. Diabetes was induced using alloxan and was treated with DADS. After a stipulated time the rats were anesthetised and sacrificed to collect the blood and liver tissue. Various Lipid parameters, glucose, lipoprotein lipase, TBARS, total thiols, AST, ALT, HMG CoA Reductase, fecal bile acids were estimated in the blood, feces and homogenised liver tissue using standard procedures. Liver histological section were prepared and observed under the microscope.

Statistics- One way ANOVA followed by post hoc ‘t’ test is done.

Result- There was significant decrease in the blood and liver tissue lipid parameters of DADS treated alloxan induced diabetic rats when compared to the alloxan induced diabetic rats. There was also a significant reversal of histological and biochemical changes in the liver of DADS treated alloxan induced diabetic rats when compared to the alloxan induced diabetic rats.

Conclusion- From this study it can be concluded that the DADS a principle compound of garlic, definitely has the hypolipidemic and hepato-protective effect in diabetic rats, which may reduce the morbidity in diabetic cases due to dyslipidemia without the adverse effects.