The effect of saponin from *Solanum anguivi* Lam. fruit on serum lipid profile and oxidative stress in hepatocytes of diabetic rats.

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**Introduction:** Non-insulin dependent diabetes mellitus (NIDDM) is a multifactorial disease characterized by hyperglycemia and lipoprotein abnormalities. Hyperlipidemia has been ranked as one of the greatest risk factors contributing to the prevalence and severity of coronary heart diseases. Oxidative stress and its related biological damage have been proposed to be involved in the development and maintenance of disease. The present study was conducted to investigate effect of saponins from *S. anguivi* Lam. fruits on lipid profile and oxidative stress in alloxan-induced diabetic rats.

**Experimental Part:** Alloxan diabetic rats were orally administered (20, 40, 60, 80 and 100 mg/kg body weight saponin) for 21 days. The rats were fasted overnight, and sacrificed on the 22nd day of the experiment. Serum lipid profile was analyzed. Catalase, superoxide dismutase (SOD) as well as thiobarbituric acid reactive substances (TBARS) were determined in both serum and liver.

**Result and Discussion:** A significant (P<0.05) dose dependent reduction in the level of triglyceride, cholesterol and LDL cholesterol in the serum was observed, A decrease in MDA concentration in serum and liver was observed. Both serum and liver SOD increased with corresponding increase in the concentration of saponins when compared with the control group. However, catalase activities increases significantly (P<0.05) in both serum and the liver.

**Conclusion:** The present study results show that saponin from *Solanum anguivi* Lam. fruits has Hypolipidemic, antioxidant and antiperoxidative properties. These observations indicate that the consumption of *Solanum anguivi* Lam. fruits can assist in the management of diabetic patients.

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