Hypolipidemic and antiperoxidative potential of an edible mushroom *Volvariella volvacea* in Streptozotocin– Nicotinamide administered rats

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ABSTRACT

Hyperlipidemia is one of the major risk factors for cardiovascular disease in diabetes especially type II. Synthetic lipid lowering agents may cause mild to severe side effects. Mushrooms are the unexploited source of biologically active agents and offer protection against various disorders. They are low calorie food with low fat and zero cholesterol. The present study examined the effect of methanol extract of an edible mushroom *Volvariella volvacea* on lipid profile (TC, TG, LDL, VLDL & HDL) in serum, lipid peroxides and protein carbonyls in heart tissue in STZ induced rats. Rats divided into 6 groups were administered with Streptozotocin (STZ) (60mg/kg) and nicotinamide (110 mg/kg) intraperitoneally to induce hyperglycemia, except group I (control). Group II served as diabetic control. Two groups (III&IV) of rats were administered with methanol extract of mushroom (200 & 400 mg/kg) orally for 30 days. Another STZ treated group (V) was given Glibenclamide (10 mg/kg) and the group VI received Vitamin E (40 mg/kg).The results showed that administration of mushroom extract elicited significant reduction of lipid profile except HDL which showed significant elevation. An appreciable fall in lipid peroxides and protein carbonyls was observed in the heart of *V.volvacea* treated rats. The effect of mushroom was comparable to the Glibenclamide and Vitamin E. This study demonstrated that the mushroom *V. volvacea,* offers promising hypolipidemic and antiperoxidative effects in STZ induced rats.

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