



Toxic effect of cathinone (an active principle of *Catha edulis*) on brain lipids in Swiss albino mice

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Abstract

The leaves of khat plant (*Catha edulis*) are widely consumed by people of East African countries and Arabian Peninsula for their pleasurable and stimulating effects. The consumption of khat is prohibited in the Kingdom of Saudi Arabia but it is being used by the people of Kingdom, especially in the region of Jazan, where it is easily available due to its cultivation in the neighbouring country Yemen. The objective of the study was to evaluate the effect of very low doses of cathinone on the brain lipids. Male Swiss albino mice were divided in 4 groups, one control and 3 experimental and each group having 6 animals. (-) Cathinone, 0.125, 0.25 and 0.5 mg/kg body weight was given intraperitoneal to animals for 10 days, once daily. Cathinone has elevated the level of triglyceride significantly and dose dependently as compared to control group. On the other hand, the content of ganglioside was depleted significantly and dose dependently in experimental groups as compared to control group. A significantly elevated level of cholesterol was observed with the doses of 0.25 and 0.5 mg/kg and phospholipids with the dose of 0.5 mg/kg of cathinone as compared to control group. No significant change on total lipids was observed in cathinone treated group as compared to control group. The study concludes that very low doses of cathinone were sufficient for the change on the brain lipid contents to provide excitement in khat chewers.

Keywords: Brain lipids (phospholipids, triglyceride, cholesterol, gangliosides), *Catha edulis*, Cathinone, Swiss albino mice