

Abstract

This study reports acute and sub-chronic effects of cathinone on hormonal alterations in single-caged vervet monkeys. Fourteen adult vervet monkeys were used, 12 of which were treated and 2 controls. Pre-treatment phase of 1 month aimed at establishing baseline levels of hormones while treatment phase of 4 months considered the dose- and time-response effects of cathinone on serum cortisol and prolactin levels. Test animals were allocated four groups of three animals each and administered 0.8, 1.6, 3.2 and 6.4 mg/kg body weight of cathinone orally while controls were administered normal saline. Treatment was done at alternate days of each week. Serum prolactin and cortisol immunoassays were done. Hormonal data was analysed by repeated measures ANCOVA. Results indicate a dose [$F_{(4, 8)} = 218, P < 0.001$] and time [$F_{(18, 142)} = 21.7, P < 0.001$] dependent effect of cathinone on cortisol levels with a significant dose by week interaction [$F_{(71, 142)} = 4.86, P < 0.001$]. Similarly, there was a decrease in serum prolactin [$F_{(4, 8)} = 267, P < 0.001$] with escalating doses of cathinone with a significant dose x week interaction [$F_{(59, 118)} = 13.03, P < 0.001$]. The findings demonstrate that at high doses and long-term exposure, cathinone causes hormonal alterations probably via changes in hypothalamo-hypophyseo-adrenocortical and gonadal axes integrity.