

SERUM GLUCOCORTICOIDS AND TESTOSTERONE OF SPIDER MONKEYS (*Ateles geoffroyi*) IN CAPTIVITY: RESPONSE TO CAPTURE AND ANESTHESIA.

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The spider monkey (*SM*) (*Ateles geoffroyi*) is one of the three primate species living in Mexico forests, endangered by environmental perturbations of their habitats and even hunting. The objectives of this study were to investigate *SM* serum glucocorticoids (GCs) and their adrenal and gonad response to stressful situations. Seven adult male *SM* living in special facilities at Parque de la Flora y Fauna Silvestre Tropical, Univ. Veracruzana, Mexico were included here. Every 2 months the animals were captured for clinical controls (total 7 times). Three blood samples from each individual were obtained in each capture: (1st) 5–15 min after pre-anesthesia by remote ketamine injection in the outdoor enclosures; (2nd) 3 min after tiletamine-zolazepam injection applied 2-4 h after being moved to the laboratory; (3rd) 20-30 min after the second tiletamine-zolazepam anesthesia. Samples were frozen until cortisol, corticosterone and testosterone were analyzed by radioimmunoassay (RIA). Results: cortisol was the main GC in *SM* serum (267.01 ± 32.48) ng/ml; corticosterone concentration was significantly lower (18.22 ± 1.84 ng/ml). After the second and third anesthesia both values were significantly increased. Anesthesia decreased testosterone concentrations (1.00 ± 0.21 ng/ml in sample 1st vs samples 2nd and 3rd (0.71 ± 0.10 ng/ml and 0.44 ± 0.07 ng/m). In summary these results showed that cortisol and corticosterone are present in *SM* serum, being cortisol 15 times higher than corticosterone; both GC respond to capture-anesthetic challenge increasing their serum concentrations, and finally that serum testosterone was rapidly affected by stressful situations as capture-anesthesia.

Keywords: *Ateles geoffroyi*, Glucocorticoids, Testosterone, Stress