MORPHOLOGY, BLOODGLUCOSE AND LIPID LEVELS INTHREE NINE-BANDED ARMADILLOS (DASYPUS NOVEMCINCTUS: LINNAEUS, 1758) – DATA REPORT

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RESUMO

Evolutionary adaptation to select the most suitable animals for survival comes up against the ability to survive during times of food shortage. At this point, we can emphasize that the mechanism of fat storage and body constitution are important points to promote better control of health and well-being, beyond the direct contribution to the conservation of this species. Estimate body size and weight of the organs of the gastrointestinal tract, as well as determine blood glucose and lipid levels in armadillos. Blood samples (8ml) was collected from three adult male armadillos maintained in a research facility by puncture of subclavian vein after anesthesia during routine check-up to analyze serum glucose and lipids. The body weight was obtained and the total size, head+tail size and tail size were measured. After this events, the animals died naturally, without knowledge of a specific cause. During necropsy, stomach, small and large intestine and liver were removed and weighed. The liver was frozen for further analysis of the fat content by method of Folch et al. (1957). All procedures followed Ethic Principles on Animal Experimentation and approved by CEUA of FMVZ-UNESP (number 0203/2017-CEEA, 10/19/2017). The maintenance of animals under human care was authorized by SISBIO (number 60819-1, 10/25/2017). The animals total size was 69,78±7,67 cm, the head+tail size was 42,94±0,42 cm, the tail size was 26,83±7,52 cm and body weight was 3,87±0,42 kg. Stomach weigh was 36±3,0 g and your relative weight to body weight was 0,94±0,18%. Intestine weight was 115,0±39,15 g and its relative weight was 3,01±1,05%. Liver weight was 104,0±18,03 g and its relative weight was 2,68±0,25%. Serum glucose was 49,22±11,35 mg/dL, serum total cholesterol was 76,44±13,62 mg/dL, serum HDL-cholesterol was 53,22±13,38 mg/dL, LDL- cholesterol was 20,92±2,02 mg/dL, VLDL-cholesterol was 2,29±0,54 mg/dL and serum triglyceride was 11,44±2,69 mg/dL. The percentage of liver fat was 7,00±0,52%. The animals showed smaller sizes that those observed in literature. However, these results are in agreement with those observed in a study who reported that armadillos occurring in Brazil are smaller than armadillos in USA. Glucose and total cholesterol showed lower values than those found in literature. Possibly it's a reflection of animals' metabolism adaptation to situation of captivity, with short fasting periods, as they received food daily, reducing need to use energy stocks. This situation may also explain low value found for triglycerides. Armadillos seem to have naturally high blood HDL-cholesterol. The fat liver percentage observed in armadillos is greater than that found in rats, and this result suggest that armadillos may more frequently use fat storage mechanism in hepatocytes as survival process in periods of low food supply. Nine-banded armadillos, this study, are smaller and less heavy like observed in literature. Fat liver percentage observed suggest that armadillos may more frequently use fat storage mechanism. Further studies are needed to establish the normal value of triglycerides and fat liver in armadillos.

PALAVRAS-CHAVE: biometry, fat liver, serum glucose and lipids, Xenarthra

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