THE RELATION OF OKRA’S FIBER CONSUMPTION AND HYPERTROPHY ON TISSUES OF DIABETIC RATS

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Dietary fiber are carbohydrates and lignin, nondigestible neither absorbed in the upper digestive tract that have beneficial physiological effects. There are two types of fiber: insoluble and soluble. Insoluble fiber keeps the digestive system clean and regular. Soluble fiber may help improve glycemic control. Both fibers are found in okra. The objective of the present study consisted in evaluate okra’s fiber (Hibiscus esculentus, L.) on the metabolism of streptozotocin-induced diabetic rats. The diets (AIN-93G) were formulated using the following source of dietary fiber: control cellulose (CC), control inulin (CI) and experimental okra (EO), after streptozotocin-induced diabetes, three more groups were created: control cellulose diabetic (CCD), control inulin diabetic (CID) and experimental okra diabetic (EOD). All groups of rats were fed for 4 weeks, followed by the evaluation of the parameters as feed uptake, mass of the testicles, kidney, in epididymal and perirenal fat. The results showed that, when comparing with their respective control groups, the remaining perirenal fat was 42% (EOD), 18% (CCD) and 30% (CID) \( p < 0.05 \); the increase kidney size was 16% (EOD), 48% (CCD) and 30% (CID) \( p < 0.05 \). Results also showed for EOD groups in a 24 hour period a lower water intake (30%) and lower urinary excretion (64%), than CCD and CID groups. In summary, results of this study suggest that when introduced in the diet of streptozotocin-induced diabetic rats for 4 weeks, okra’s fiber might be beneficial to the diabetic rat, providing protection to the tissues against the hypertrophy of the testicles and kidney.