

ANIMAL HEALTH & VETERINARY MEDICINE

October 20-21, 2017 | Toronto, Canada

The effect of ginger administration on body weight and ovarian changes in pre pubertal female rats

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This study was conducted to evaluate the effects of ginger (*Zingiber officinale*) supplementation on growth, ovarian weight and blood metabolites of pre-pubertal female rats. 24 Sprague Dawley rats were used in the present study. Rats were 25 days of age and weighed 45.6 ± 5 g at the beginning of the study. Two rats were placed in each cage in a temperature-controlled room and offered feed on ad libitum basis. Rats were randomly divided into three equal groups (n=8); control (CON, no ginger), 50 mg ginger/kg of body weight (G50) and 100 mg ginger/kg of body weight (G100). After adaptation, the CON group received distilled water, while the experimental groups received the designated ginger dose (gavage) daily for 30 days. All animals were sacrificed at the end of the 30-day period for blood (cardiac puncture) and reproductive tract collection. Body weight and size were affected by date of collection ($P < 0.01$) but not by ginger supplementation. Body weight change was numerically greater in the G50 group. Blood glucose and urea nitrogen were similar among groups while cholesterol tended to decrease ($P < 0.10$) as the ginger dosage increased. Weight of the right ovaries were similar while the G100 had smaller ($P < 0.05$) left ovaries than the remaining groups. Reproductive tract weights tended to be greater ($P = 0.10$) in the G50 than in the CON group while the G100 group was intermediate. Results of the present study indicate that ginger administration to pre-pubertal female rats tends to decrease serum cholesterol, with higher doses negatively affecting ovarian development.

Biography

R T Kridli has completed his PhD from New Mexico State University. He has been a faculty member at the Dept. of Animal Production, Jordan University of Science and Technology since 1996. He has spent 5 years at the Dept. of Biomedical Sciences, University of Guelph as a Visiting Scholar and later as a Research Associate. He has published more than 60 papers in reputed journals mainly in the area of animal reproduction.

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