Consequences of unilateral cryptorchidism on semen and sperm characteristics in West Afri- can Dwarf Goats

Lewis Okechi Okoro

Department of Veterinary Obstetrics and Reproductive Diseases, Faculty of Veterinary Medicine, University of Nigeria, Nigeria

Abstract:

Objective: To evaluate the influence of unilateral cryptorchi- dism on semen and sperm characteristics in West African Dwarf (WAD) bucks. Methods: Semen was collected using electroejaculator from five unilaterally cryptorchid (UC) and five normal (non-cryptorchid) WAD bucks and analyzed for gross, microscopic and bio- chemical characteristics. Results: Gross semen evaluation showed no differences between the groups in semen color, viscosity

and pH, whereas the normal bucks yielded semen with sig- nificantly higher specific gravity (P=0.043 6) and volume (P=0.038 8) than the UC group. Fol- lowing semen microscopic evaluation, the percentage of sperm vitality (live sperm) was not significantly different between both groups. However, UC bucks yielded semen with signifi- cantly lower sperm motility (P=0.038 7), sperm concentration per mL (P=0.002 0) and total sperm count per ejaculate (P=0.007 4). The percentage total sperm abnormali- ty was also higher (P<0.000 1) in the semen of UC goats. Abnormalities observed included sperm with cytoplasmic droplets, looped tails, coiled tails and tailless heads. Sperm morphom- etry showed no differences in the

sperm head length and head width between the groups. Bio- chemical semen evaluation did not reveal any differences between the groups in the concen- tration of seminal plasma total protein, catalase activity and lipid peroxidation level.

Conclusions: Unilateral cryptorchidism significantly affected the quantity and quality of semen and spermatozoa in affected WAD bucks. Due to the hereditary attribute of the condition, it is recommended that animals with this condition should not be used in breeding to forestall increasing prevalence of cryptorchidism in goats.

Biography:

Lewis has completed his DVM degree at the age of 25 years from the University of Nigeria and is currently a prospective Mphil candidate at University of Hertforshire. He is a freelance aca- demic writer and researcher, co-authoring more than 5 papers published in jornals of repute. Lewis is passionate about research and education and works towards becoming a Professor someday.

Publication of speakers:

1. Comstock, Jeffrey & Wardlaw, Jennifer & Brinkman-Fergu- son, Erin & Rowe, Dennis. (2013). Computed Tomograph- ic Assessment of Body Fat in Dachshunds: A Pilot Study. Open journal of veterinary medicine. 3. 1-5.
2. Wells, Jennifer & Bartges, Joe & Kania, Stephen & Bemis, David & Gluhak, Tea. (2013). Association between Presence of Urovirulence Factors, Phylogenetic Class, and Antimicro- bial Resistance Patterns in 159 Uropathogenic Escherichia coli Samples Isolated from Dogs. Open Journal of Veteri- nary Medicine. 03. 199-203. 10.4236/ojvm.2013.32031.
3. Di Giancamillo, Alessia. (2012). Gut Peculiarities of Feed Deprived White Sturgeons (Acipenser transmontanus , Richardson 1836). Open Journal of Veterinary Medicine. 02. 52-59. 10.4236/ojvm.2012.22009.

Citation: Lewis Okechi Okoro. Consequences of unilateral cryptorchidism on semen and sperm characteristics in West Afri- can Dwarf Goats; Psychiatry 2020; November 13, 2020; Paris, France