ABSTRACTS

ISCFR 2012

July 26-29, Whistler, Canada

7th International Symposium on Canine and Feline Reproduction

In a joint meeting with

EVSSAR 2012

15th Congress of the European Veterinary Society for Small Animal Reproduction

Editors: Gary England, Michelle Kutzler, Pierre Comizzoli, Wojciech Nizanski, Tom Rijsselaere and Patrick Concannon

Reprinted in IVIS with the permission of the ISCFR Organizers
Oral administration of sodium dipyrone (anti-inflammatory and analgesic) does not compromise the efficacy of intratesticular injection of zinc gluconate as a contraceptive for dogs

Oliveira, ECS1; Muller, PM1; Silva, FLM1; Nery, LT B1; de Sá, MJC2; Oliveira-Esquerre, K3; Guerra, MMP1; Kastelic, JP4 and Douglas, RH5

1Dept. of Veterinary Medicine, UFRPE, Recife, PE, 52171-900, Brazil; 2Academic Unit of Veterinary Medicine, UFCG, Patos, PB, Brazil; 3Dept. of Chemical Engineer, Polytechnic School, UFBA, Salvador, BA, Brazil; 4Agriculture and Agri-Food Canada, Lethbridge, AB, Canada; 5B.E.T. Labs, Lexington, KY, USA.

INTRODUCTION: We reported the potential of a single intratesticular injection of a commercial zinc gluconate (ZnG) solution (Testoblock®) as an irreversible contraceptive for male dogs; in a 6-mo study, dogs were azoospermic at 60 d post injection, and histological and ultrastructural changes suggested irreversibility (1,2). Recently, we observed that some dogs had signs of discomfort after the procedure, consistent with similar reports in dogs given intratesticular injections of solutions containing zinc gluconate, namely Infertile® (3) and Neutersol® (4). It was suggested that administration of an oral analgesic and anti-inflammatory (sodium dipyrone) prior to intratesticular injection of Infertile® reduced testicular swelling and perceived pain (5). It is noteworthy that one of the mechanisms of action of zinc when injected in testis is disruption of the Sertoli cell barrier and induction of a local immune and inflammatory response that causes cellular alteration and interruption of spermatogenesis (1). Therefore, an anti-inflammatory drug could affect this mechanism of action and compromise the efficacy of the chemical sterilization procedure. The aim of this study was to determine whether the efficacy of ZnG as a chemical sterilant would be compromised by treatment with sodium dipyrone, an antiinflammatory/analgesic agent.

MATERIAL AND METHODS: This study was approved by the Animal Experimentation Ethics Committee of Federal Rural University of Pernambuco. Ten dogs received a single injection of Testoblock® into each testis (0.2 to 1.0 mL per testis, based on testis width). Dogs with signs of mild discomfort (vocalization/loss of appetite) after injection of Testoblock® were allocated to the Treated group (n=5) and received sodium dipyrone orally (25 mg/kg thrice daily for 2 d), starting when the first signs of tenderness where observed (2-3 h after the procedure). The remaining dogs (Control, n=5) did not display any discomfort and were not given any anti-inflammatory/analgesic treatment. General attitude, ability to walk, scrotal alteration (pain, swelling, dermatitis), rectal temperature and semen analysis, were determined immediately before the injection, daily for the first 7 d after the procedure, and then every 60 d until 180 d after the procedure.

RESULTS AND DISCUSSION: All dogs in both groups had normal rectal temperatures throughout the study (180 d). No biting/llicking was detected after the injection in Control dogs, whereas Treated dogs experienced mild discomfort (vocalization/loss of appetite) after injection of Testoblock® were allocated to the Treated group (n=5) and received sodium dipyrone orally (25 mg/kg thrice daily for 2 d), starting when the first signs of tenderness were observed (2-3 h after the procedure). The remaining dogs (Control, n=5) did not display any discomfort and were not given any anti-inflammatory/analgesic treatment. General attitude, ability to walk, scrotal alteration (pain, swelling, dermatitis), rectal temperature and semen analysis, were determined immediately before the injection, daily for the first 7 d after the procedure, and then every 60 d until 180 d after the procedure.

CONCLUSION: Administration of sodium dipyrone after chemical castration of dogs using an intratesticular injection of a zinc-based solution (Testoblock®) improved animal welfare but did not compromise the contraceptive efficacy of the procedure.

ACKNOWLEDGMENTS: CNPq and FACEPE.