

Ovarian Hormones and Antioxidants Biomarkers in Dromedary Camels Synchronized with Controlled Intravaginal Drug Release/Ovsynch GPG Program during Breeding Season

Authors : Heba Hozyen, Ragab Mohamed, Amal Abd El Hameed, Amal Abo El-Maaty

Abstract : This study aimed to investigate the effect of CIDR and ovsynch (Gonadotropin-prostaglandine-gonadotropin GPG) protocols for synchronization of follicular waves of dromedary camels on ovarian hormones, oxidative stress and conception during breeding season. Twelve dark colored dromedary camels were divided into two equal groups. The first group was subjected to CIDR insertion for 7 days and blood samples were collected each other day from the day of CIDR insertion (day 0) till day 21. The other group was subjected to GPG system (Ovsynch) and blood samples were collected daily for 11 days. Progesterone (P4) and estradiol were assayed using commercial ELISA diagnostic EIA kits. Catalase (CAT), total antioxidants capacity (TAC), glutathione reduced (GHD), lipid peroxide product (malondialdehyde, MDA) and nitric oxide (NO) were measured colorimetrically using spectrophotometer. Results revealed that CIDR treated camels had significantly high P4 (P= 0.0001), estradiol (P= 0.0001), CAT (P= 0.034), NO (P= 0.016) and TAC (P= 0.04) but significantly low MDA (P= 0.001) and GHD (P= 0.003) compared to GPG treated ones. Camels inserted with CIDR had higher conception rate (66.7%) compared to those treated with GPG (33%). In conclusion, camels treated with CIDR had higher hormonal response and antioxidant capacity than those synchronized with GPG which positively reflected on their conception rate. The better response of camels to CIDR and the higher conception compared to GPG protocol recommends its use for future reproductive management in camels.

Keywords : antioxidants, camel, CIDR, season, steroid hormones

Conference Title : ICVMAH 2017 : International Conference on Veterinary Medicine and Animal Health

Conference Location : Paris, France

Conference Dates : March 29-30, 2017