

**Chlortetracycline concentrations in serum and milk following single intrauterine administration in clinical endometritis camels (*Camelus dromedarius*)**

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Short title: **Chlortetracycline in milk during camels' endometritis**

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## Summary

This Research Paper aimed to evaluate the depletion of chlortetracycline (CTC) from the serum and milk of dromedary camels with endometritis after intrauterine administration. CTC pessaries were administered to five dromedary camels with clinical endometritis at a dosage of 2 g per animal. Blood and milk samples were collected before treatment and at 12 h intervals for 156 h. Serum and milk were analyzed by ultra-performance liquid chromatography (UHPLC/MSMS). The serum and milk analysis revealed that maximum CTC concentration was detected at 12 h post-treatment. The mean maximum CTC concentration was recorded in the serum and milk by 12 h after CTC administration. The maximum individual concentrations of CTC in milk ranged from 434.0 to 34.6 ng/ml. The mean concentration of CTC in the serum and milk decreased steadily by 24 and 36 h and thereafter post-treatment, respectively. CTC sustained in the milk during the period of  $144.4 \pm 13.99$  h (range, 118 to 154 h) where the serum CTC retained by  $111.2 \pm 11.70$  h (range, 106 to 130 h) after treatment. The mean milk CTC values  $\geq 30$  ng/ml was proved till 24 h after treatment (range 12 to 60 h). In conclusion, the safe residual level ( $\geq 30$  ng/ml milk) established by the US Food and Drug Administration was recorded in the dromedary milk at 24 h onward after intrauterine CTC administration.