Effects of the dose of equine Chorionic Gonadotropin (eCG) on estrus and follicular growth parameters in african bovine breed N'Dama

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WHY ?
- N'Dama : bovine breed trypanotolerant with butchery quality.
- Due to zootechnical conditions, AI needs to synchronise oestrus with hormonal protocols
- Reproductive characteristics of N'Dama not extensively studied (Okouyi et al. RASPA 2014,12,3-7)

HOW ?
- 121 heifers and cows : 4.4 ± 0.6 y (Age), 221.2 ± 20 kg (Weight), 2.4 ± 0.4 (BCS)
- Clinical (manuel palpation, echography and vaginoscopy) examination before treatment
- Hormonal protocol to induce oestrus : CIDR® (1.38 g of progesterone, Zoetis) during 7 days, PGF2α (Estrumate® Intervet) at day 5 and eCG ((Folligon® Intervet) at day 7.
- Five groups : group 0 : 1 ml of NaCl; group 1 : 300 IU, group 2 : 400 IU, group 3 : 500 IU; group 4 : 600 IU.
- Oestrus detection during 7 days.
- Postmortem examination of ovaries 8 to 10 days after treatment.
- Analysis of data using logistical regression and ANOVA (SAS).

WHAT ?

Non significant effect of eCG dose on

Significant effect of eCG dose on

Oestrus rate : average 72,7 % (P<0.02)

Silent oestrus rate : average 28,4 % (P<0.01)

Ovulation rate : average 90,1 % (P<0.02)

Multiple ovulations rate : average 18,3 % (P<0.002)

CONCLUSIONS
- CIDR can be used on N’Dama cows (100 % of retention rate)
- The hormonal protocol using CIDR-PGF2α-eCG may be recommended to induce heat and ovulation in female N’Dama.
- Injection of 300 to 600 IU of eCG would contribute to increase the pregnancy rate through an increase of oestrus detection rate an ovulation rate.
- To avoid twinning, doses of 300 to 400 IU would be recommended.

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