
OVULATION INDUCTION IN ANOESTRUS GREATER ONE-HORNED RHINOCEROS (*Rhinoceros bicornis*)

Folko Balfanz, Dr,^{1} Eveline Dungal, Dr,² Simone Haderthauer, Dipl Biol,² Franz Schwarzenberger, Prof,³ Hanna Vielgrader, Dr,¹ Thomas Voracek, Mag,¹ Thomas B. Hildebrandt, Prof, Dipl ECZM,⁴ and Robert Hermes, associate Prof, Dipl ECZM⁴*

¹Tierärztliche Ordination Tiergarten Schönbrunn, Vienna Zoo, 1130 Vienna, Austria; ²Vienna Zoo, 1130 Vienna, Austria; ³Department for Biomedical Sciences, University of Veterinary Medicine, 1210 Vienna, Austria; ⁴Leibniz Institute for Zoo and Wildlife Research, 10315 Berlin, Germany

Abstract

Assisted reproduction is still underutilized in rhinoceros breeding programs considering that many individuals cope with sub or infertility, silent oestrous, anoestrous, early embryonic death or still birth² Specifically, in greater one-horned (GOH) rhinoceros (*Rhinoceros bicornis*) irregular or anoestrous with subsequent formation of haemorrhagic follicles represent a challenging problem.¹ While hormone activity can be closely monitored in GOH rhinoceros means to induce ovulation and thus enhance breeding efforts in anoestrous females have never been published. In this study hcG and GnRH were tested for their ability to induce ovulation in GOH rhinoceros. Follicular development was closely monitored in one female by transrectal ultrasound. Development of a pre-ovulatory follicle as a prerequisite of ovulation induction took 26.9 ± 4.4 days (n=9). Particularly fast follicular growth of 0.5 cm/d was observed during the last 7 days of dominant follicle development. When a pre-ovulatory follicle was present (11.9 ± 0.2 cm) ovulation was induced by i.m. injection of either hcG or GnRH. Successful induced ovulation was determined by presence or absence of the ovulatory follicle 1 – 3 days after the treatment and by the increase of 20-oxo-gestagene concentration in the feces. Ovulation in the anestrus female GOH rhinoceros was successfully induced in 78% (7/9) of the treatments regardless of the hormone used, hcG or GnRH. hcG induced 4 (4/6) while GnRH induced 3 (3/3) ovulations. We therefore conclude that both hcG and GnRH have the potency to induce ovulation in GOH rhinoceros.

Key words: Assisted reproduction, endocrinology, faecal hormones, oestrous synchronization, ultrasound

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