
SEMEN COLLECTION IN BLACK RHINOCEROS (*Diceros bicornis*) VIA URETHRAL CATHETERIZATION

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Abstract

Conservation in rhinoceros is becoming increasingly dependent on assisted reproductive techniques.^{1,2,4,5} Assisted reproductive techniques including hormone monitoring, semen cryopreservation and artificial insemination,^{1,2,5} have decreased the health risks associated with transport and introduction of animals, and in other taxa, have made it possible for animals to reproduce posthumously. Electroejaculation is one method of semen collection which can provide samples for both evaluation of reproductive potential and use in assisted reproduction. Logistics of electroejaculation are considerable, partly because of the specialized equipment and personnel needed. In contrast, urethral catheterization requires less specialized equipment, can be performed opportunistically, yet provides a sufficient sample to evaluate concentration, motility, viability and morphology.³ It is also possible to freeze a sample of semen obtained with this technique, albeit the sample is significantly smaller than with electroejaculation. Samples were successfully obtained from a black rhinoceros (*Diceros bicornis*) repeatedly anesthetized with an etorphine-ketamine-azaperone combination. A sterile 5Fr bullet tip catheter (Adept Vet LLC, Michigan, USA), with a small amount of non-spermicidal gel applied to the tip, was passed retrograde through the urethra to the prostate (~ 100-110cm), as confirmed by rectal ultrasound. Once in the area of the prostatic urethra, 1ml of negative pressure was applied, then the catheter was rotated without negative pressure, and slight negative pressure was then re-applied. The catheter was removed without negative pressure. The semen sample was placed in a conical vial, evaluated and cryopreserved as described.⁴ Except for volume and concentration, semen characteristics were comparable to those obtained via electroejaculation.

Key words: Assisted reproduction, conservation, cryopreservation, *Diceros bicornis*, semen collection

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