

DYSTOCIA AND MANUAL DELIVERY OF A FETUS IN A SOUTHERN WHITE RHINOCEROS

By Evan Blumer and Adam Eyres

On December 31, 1991, Macite, a multiparous, 29-year-old, wild-caught, female southern white rhinoceros (*Ceratotherium simum simum*) currently held at the Fossil Rim Wildlife Center, was determined to be in prolonged stage 2 parturition. The condition of the animal had remained unchanged for approximately 24 hours with the animal exhibiting periods of restlessness and depression, vaginal discharge, and intermittent uterine contractions. During the periods of apparent uterine contraction, a protrusion was noted in the perianal region that most likely was the result of pressure from a malpositioned fetus. It was determined that a dystocia existed and that intervention was necessary.

The animal was treated with 0.75 mg. of etorphine I.M. to achieve standing restraint. After 22 minutes, an appropriate plane of anesthesia was reached and the animal's head and body were restrained with nylon straps to prevent injury both to her and to the animal care staff. Standard sized hay bales were positioned beneath the rhinoceros to support her in the event of possible recumbency. Intravenous fluids (lactated ringers) were started and 500 ml. of 23% calcium gluconate and 500 ml. of 50% dextrose were administered intravenously.

After manual removal of a large volume of firmly packed, dry feces, rectal palpation revealed a fetus firmly lodged in the birth canal. Initial palpation per vagina revealed the fetus to be in a normal dorsopubic position, with both forelimbs lodged between the pelvis of the cow and the mandible of the fetus. Continued straining by the cow prevented repulsion and manual repositioning of the fetus. To reduce straining and contractions, 10 mg. of detomidine was administered I.V. This dose was adequate in effectively reducing further straining and contractions.

All attempts at eliciting reflexes or responses from the fetus proved unsuccessful and the fetus was determined to be dead. Subsequent effort were focused on vaginal removal of the fetus due to the impracticality of performing a caesarian section on an animal of this size.

After approximately one hour of attempted manipulation, the right front foot was repositioned and exposed. However, the left front foot remained lodged in the pelvis and could not be manipulated. An attempt was made to remove portions of the right front forelimb to enable better access to the left forelimb. The skin surrounding the right carpus was incised deeply and traction was placed on the distal portions of the limb with the intention of removing the limb's muscular and skeletal structures. Unfortunately, the limb disarticulated at the carpus and did not provide the desired access to the restricting limb.

Numerous further attempts at repulsion, traction and repositioning were unsuccessful, and preparations began for resection of the fetus with a fetotome. A final attempt at repositioning the fetus was successful, however, and an obstetrical chain was placed on the left forelimb. Simultaneous traction on the leg and anteroventral repulsion of the head provided for the successful extrication of the fetus.

After 3 1/2 hours of manipulation, a 150 pound, full-term, male calf was delivered. The calf appeared to have been dead for 24 to 48 hours. The cow's perianal region was scrubbed and her uterus was infused with approximately 10 liters of dilute nolvosan solution. She was also given an enema of warm soapy water and mineral oil. Additional treatment consisted of 24 g. Trimethoprim sulfadiazine I.M., 60 I.U. oxytocin I.V., 1,500 mg. flunixin megalamine I.M. and 1,500 mg. furosimide I.V. Anesthesia was reversed with 1.5 mg. diprenorphine I.V. and 100 mg. naloxone I.M. The animal recovered from anesthesia normally.

Treatment was continued with 28.8 g. Trimethoprim sulfadiazine P.O., B.I.D. and 1,500 mg. flunixin megalamine P.O. daily. Three days following the dystocia, the animal was still depressed, had not passed feces and had a serosanguinous vaginal discharge. She was re-anesthetized with 1.0 mg. etorphine and her uterus was infused again with dilute nolvosan solution followed by another enema.

Antibiotic therapy was continued for 14 days and the animal appears to have recovered normally. A clear, odorless, vaginal discharge was observed for several days following the second uterine infusion, but had resolved by the end of antibiotic therapy.

After several weeks of close observation, Macite has been reintroduced to the resident white rhinoceros herd with the hope that she will breed again in the near future.