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REDUCTION OF A RECTAL PROLAPSE IN A WILD LIONESS

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Abstract: A rectal prolapse in a wild lioness (*Panthera leo* Linnaeus) was manually reduced with the aid of chemical restraint and anaesthesia employing phencyclidine hydrochloride, acetylpromazine and thiopentone sodium.

The ethical justification for the procedure was based on aesthetic and economic values.

INTRODUCTION

The opportunity to offer veterinary assistance to wild animals is a rare event. The reasons for this have been summarized by Harthoorn *et al.*[1] Most animals in national parks can, for economic reasons, be considered only on a species basis rather than as individuals and those that become incapacitated are rapidly eliminated by predators and scavengers which depend in part on such unfortunates for their sustenance. However, certain species which have high tourist appeal or are locally rare, may justify veterinary assistance when an appraisal of their incapacity leads the veterinarian to conclude that medical or surgical assistance will be attended by rapid recovery. Recent advances in drug immobilization of wild animals in their natural habitat[3,4] have made feasible operative interferences which would previously have been impossible. This report concerns the chemical immobilization, anaesthesia and reduction of a rectal prolapse in a young lioness in the Queen Elizabeth National Park, Uganda.

CASE REPORT

The patient, approximately 15 months old and weighing an estimated 50 kg, was a member of a well known pride, 22 strong, which frequented a popular tourist circuit in the Park. Eight days prior to the operation a tourist reported seeing a young lioness which appeared to have something hanging from her rectum. She was seen to stop frequently and strain as if trying to defecate. The pride was not seen again for a week. When it was relocated in the bush about 10 km from the Park headquarters, an examination of the lioness through binoculars revealed a rectal prolapse.

Since the pride had killed a buffalo (*Syncerus caffer* Sparrman) the night before, and were unlikely to move far, preparations were made to immobilize the lioness, examine her fully and if possible to reduce the prolapse.

The apparatus used for the immobilization was a powder operated long Range Cap Chur Rifle. [2] A 2 ml syringe projectile was loaded with 75 mg phencyclidine hydrochloride[3] in 1 ml of solvent (1.5 mg/kg body weight) and 5 mg acetylpromazine.[4] The remaining space in the syringe was filled with distilled water.

The lioness was relocated lying down in the middle of the pride and it was an easy matter to fire the projectile into the muscles of the hindquarters from a range of about 20 m. On being hit the lioness

[1] Present address: c/o FAO/UNDP Wildlife Management in Kenya, P.O. Box 30559, Nairobi, Kenya.
[2] Palmer Chemical & Equipment Co., Atlanta, Georgia, U.S.A.
[3] Sernylan Parenteral: Parke Davis & Co.
[4] Boots Pure Drug Co., Nottingham, U.K.

jumped up and ran a few metres but did not leave the area occupied by the still somnolent pride. Seven minutes after the injection, signs of incoordination and head turning were observed and at 10.5 minutes the animal appeared to be deeply narcotized. It was necessary now to distract the rest of the pride, including the patient's dam who was becoming agitated, in order to draw alongside the unconscious lioness and lift her into a vehicle. This was finally achieved by tying a dead waterbuck's head on about 15 m of rope and dragging it behind the vehicle through the area where the pride was lying. The effect was immediate. Every lion, lioness and cub jumped up and pursued the dragged head for 100 m into the bush before they caught it and pulled it off the rope. While they were thus engaged the patient was lifted into vehicle which was then driven away to a point about 2 km from the pride.

Clinical examination revealed that although she had lost some weight as compared with her two normal litter mates, she was in reasonable physical condition. The prolapse was found to consist of the caudal portion of the rectum which had everted through the anus for approximately 20 cms. The mucous membranes were only slightly oedematous and there were several small shallow lacerations. The condition was differentiated from an intussusseption by the insertion of a blunt probe between the prolapsed mass and the anal sphincter. In view of the relatively healthy condition of the prolapsed viscus it was decided to attempt manual reduction.

The prolapse was first washed with warm water and cetavlon[5] but during this procedure the lioness attempted to raise her head and uttered some low growls. Further handling of the prolapse provoked a similar reaction and some straining, so complete surgical anaesthesia was achived by the intravenous injection of 0.3 g thiopentone sodium,[6] using the recurrent tarsal vein, until the pedal reflex was abolished. The prolapse was then handled with impunity. The hindquarters of the lioness were raised by hand to facilitate the reduction. The prolapse was liberally smeared with cetavlon cream and was easily replaced through the anal sphincter. Complete reduction was obtained by inserting a 20 ml plastic syringe, with the nozzle removed, through the anal sphincter into the rectum and gently pushing the prolapse out straight. A purse string suture of linen thread was inserted in the anal rim. Linen thread was used in the hope that it would disintegrate in due course and thus obviate the necessity to immobilize the lioness again for its removal.

An intramuscular injection of one mega unit of benzyl penicillin was given and a notch was cut in the pinna of one ear so that she could be recognized with certainty in future.

The immobilization and subsequent reduction of the prolapse was carried out at 1700 hours and took about 1 hour to complete. One of the disadvantages of the use of phencyclidine as an immobilizing agent for wild animals is the prolonged recovery time. Darkness falls in the Queen Elizabeth National Park at about 1930 hours and an immobilized lion left unprotected in the bush would be at the mercy of hyaenas (*Crocuta crocuta* Erxleben) which are often to be found in the vicinity of prides of lion. It was therefore decided to mount guard, in a vehicle, over the unconscious lioness until she recovered sufficiently to be able to fend for herself. During the night she was turned over several times by hand. The pride visited the area before dawn and the patient's mother sniffed and licked her. Although she was still unconscious no member of the pride made any attempt to molest her. She stirred for the first time at 0430 hours and by 0700 was conscious and able to walk. Anaesthesia had lasted approximately 12 hours. She spent the following day in the company of a lame male lion but disappeared during the next night. The lioness was seen again with the pride a day of two later.

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[5] ICI Limited, Wilmslow, Cheshire, U.K.

[6] Intraval Sodium V: May and Baker Ltd., Dagenham, U.K.

The lioness was kept under intermittent observation for about 10 days. During this period she behaved normally and was not seen to strain. The pride then moved away and contact was lost.

She was seen on many occasions throughout the following months and quickly regained her lost condition. About 9 months after her operation she was found dead, apparently killed by a buffalo.

DISCUSSION

No reason could be found for the prolapse. There was no subjective evidence of heavy parasitism or protein depletion and diarrhoea was not present. McMurry[2] described a case of rectal prolapse in a captive lioness which was found to be due to a rough piece of bone, lodged in the rectum. No such obstruction was found in this case nor was there any neoplasia.

Reduction of the prolapse was surprisingly easy in spite of the fact that it was of at least 8 days duration. In McMurry's case the prolapse was of anly 'several hours duration' but he was unable to reduce it manually because of extensive adhesions and oedema. In the case reported here the anal sphincter must have been completely relaxed even before the administration of the drugs and this may account for the absence of serious oedema due to strangulation.

The weight of the young lioness in this case was probably underestimated and this may explain the required intravenous thiopentone sodium to complete the anaesthesia. However, the extended recovery time may have been an advantage in that it allowed a long period of analgesia during which there was no straining and the prolapsed rectum was given a chance of regaining its vitality.

The ethics of rendering veterinary aid to wild animals in national parks require some examination. One might argue that any animal which becomes incapacitated for whatever reason is an unsuccessful individual and should be allowed to recover or die without man's intervention. This approach is coldly logical and describes the normal course of events in areas remote from man's influence. However, in national parks the management of the wildlife stocks for ecologic or economic reasons may be desirable.

The large carnivores are of great value in the national parks of East Africa as a tourist attraction and in some areas individual animals are recognized over long periods by park staff and tourist alike. The offer of veterinary assistance to such animals seems justified when the following criteria can be fulfilled:

1. The patient is not at a disadvantage due to extreme youth or age
2. The patient retains reasonable physical condition
3. The prognosis is good
4. Convalescence is likely to be short
5. The cause of the incapacity is not likely to be hereditary
6. The patient is a rare or touristically valuable species.

There will, of course, be occasions when a guarded prognosis must be given until chemical immobilization has allowed a full clinical examination to be made but in a case where the above criteria are found to be unfulfilled it is a simple matter to proceed with euthanasia.

Wildlife management is a relatively new science and its veterinary aspects are largely unexplored. Sick and injured animals in national parks present special problems in view of their economic value and their close contact with human beings and although the advent of drug immobilization has made possible the wide range of sophisticated techniques which are inflicted upon domestic animals, the wildlife veterinarian should not be too influenced by this. He should rather consider each case in the light of the criteria listed here and should be prepared to advise the humane destruction of those unfortunates which do not fulfill them.

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LITERATURE CITED

1. HARTHOORN, A. M., S. HARTHOORN, and P. D. SAYER. 1971. Two field operations on the African Lion *(Felis leo)* Vet. Rec. 89: 159-164.
2. McMURRY, T. S. 1960. Rectal prolapse in a lioness as a result of feeding bones. J. S. An. Pract. 9: 140-141.
3. PIENAAR U de V. 1968. The use of drugs in the field immobilization and restrain of large wild mammals in South African National Parks. Proc. International Symp. wild animals in Med. and Vet. Res. — incomplete.
4. PIENAAR U de V., E. LE RICHE, and S. LE ROUX. 1968. The use of drugs in the management and control of large carnivorous mammals. Keedoe 12: 177-184.

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