

Immobilization of a free ranging Royal Bengal Tiger (*Panthera tigris tigris*) at Tezpur, Assam

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Abstract

A strayed tiger was successfully captured and rescued from a thickly inhabited area in Tezpur city in the state of Assam. The immobilizing drug that was used a combination of Xylazine 200 mg and Ketamine 500 mg that was administered using 7 ml aluminium dart of a dist inject syringe projector (model 60 N). The entire operation was carried out under stressful conditions using limited availability of equipment as well as the knowledge of usage of drugs in wild tigers. The rescue operation, the first of its kind in the state of Assam has thrown open several issues for debate including the rehabilitation of wild felids, the choice of drugs and the mental and logistical support that is required for carrying out such a difficult operation.

Key Words - Tiger, capture, tranquilization, immobilization, release, care.

Introduction

North East India is one of the 25 Biodiversity hotspots in the world. The state of Assam with its tropical climate and vast area provides an ideal habitat for a variety of wild flora and fauna. One such animal that is known to have attained its highest densities in the world in Kaziranga National Park, Assam is the Royal Bengal Tiger (*Panthera tigris*). On 6th March 2004, a tiger happened to stray from its natural habitat to a thickly populated area in Tezpur town in the early hours of the day. Tezpur is a small historical and beautiful town located at the banks of River Brahmaputra in Northern Assam (130 km from Guwahati). The tiger had mauled one and killed two persons before the forest department authorities were alerted to capture the animal. The details of this interesting and adventurous operation (the first in Assam) from its capture, rescue and translocation has been discussed in the following pages.

Methodology

The Assam State Zoo (ASZ), Guwahati has the necessary expertise to immobilize and rescue strayed animals and after receiving information regarding the strayed animal a team comprising of the Divisional Forest Officer, Veterinary doctor and a few other technical assistants rushed to the spot. The team reached the site at 3.00 p.m. Till that time the tiger was lodged inside a *kuccha* house. The house was located on a small hillock with a water body on one side. People had surrounded the house from all accessible directions and it was almost impossible to get a good view of the animal.

The strategy adopted by the writer was to approach the tiger from an adjacent house, the bamboo wall of which had been broken to get a view of the animal. After getting a suitable position, the tiger was tranquilized using Xylazine 200 mg and Ketamine 500 mg as a total dose. They were mixed and loaded in a 7 ml aluminium dart of a dist injects syringe projector (model 60 N). The dart was aimed from a distance of 10 meters.

Results:

The dart had successfully lodged itself on the rump of the

tiger and within 15 minutes the tiger had come to the sternal and then to the lateral recumbency position. As the cage to relocate the tiger had not arrived by them, it was best decided to keep it under police lockup. However by nightfall the tiger had recovered and under those stressful conditions it had inflicted himself with injuries besides damaging the police lockup where it had been kept. It was decided to move the animal in the early hours of morning and the tiger was tranquilized again using the same combination of drugs that were used in the first attempt. By afternoon of 7th march, 2004 the tiger was shifted to its new home at the Assam State Zoo in Guwahati and kept under observation.

Discussion:

The entire operation which was unique and one of the first of its kind in the state of Assam threw open several aspects for discussion which are mentioned as below:

1. Dealing with strayed animals- The National Zoo Policy, 1998 and the IUCN Species Survival Commission's Re-introduction Specialist Group lays down certain guidelines according to which rescue or conservation of strayed animals is feasible only when there is no translocating the wild animal back into the wild. However, studies with strayed leopards in Maharashtra have also indicated that it is extremely difficult to rehabilitate the felids back into the wild because of their acute homing abilities and the fact that they remain highly territorial resulting in increased man-animal conflict. The strayed tiger in this case had possibly been ousted from its natural habitat by another dominant male and translocating it in a similar habitat would have jeopardized its survival there in case of already existing resident tigers. It may have also happened that its habitat had degraded to such a condition that it had to widen its home range in search of prey. Since most of the wilderness areas are today surrounded by human habitations it is likely that it would have preyed on domestic cattle and livestock thereby increasing the instances of man-animal conflict. These considerations therefore bring us to a pertinent question when dealing with large cats such as the tiger. The zoo policy clearly states that what animals cannot be captured for exhibiting at the zoo, but to decide for the future home of this rescued tiger that has since been kept at the Assam State Zoo needs further deliberations.

2. Choice of drug and dosage- Very less information is available regarding capturing and immobilizing of fields in the wild. Other than West Bengal Forest Department that regularly uses a dosage of Ketamine and Xylazine for problem animals, majority of the reports are from captive conditions. While, Ketamine is a specific anesthetic for feline species, Lumb and Jones, 1984 have suggested Ketamine @7 mg / kg for Tigers. Use of Xylazine @1 mg / kg has reduced the dose of Ketamine to 2.5 mg / kg and

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produced suitable results with sufficient duration in the tiger. The other available combination of Ketamine 2.5 mg / kg along with medetomidine, another α_2 -adrenoceptor also produces surgical anesthesia in tigers (Jalanka and Roekon, 1990). However to ascertain the health and weight of the tiger in wild is difficult and therefore the choice of the right drug dosage can vary from person to person. Moreover in this case, the repetition of the anesthesia was required due to non-availability of cage for translocation of the tiger, which caused drowsiness in the tiger for 2 days. The safety limits of the drug were therefore established by trail and error method only.

3. Rescue operation, design of cage and transportation- it has been seen that in any rescue operation the most neglected part is the logistics that are required for the rescue, transportation and rehabilitation of the wild animal. In this case too, the entire operation became even more difficult and stressful because of the chaos that resulted due to the presence of a large number of onlookers and troublemakers. Crowds cannot be avoided due to the sensitivity of such cases however simple strategies such as to cordon off the area and train the staff of deal with impatient crowds can go in a long way to carry out the operation in a smooth manner. Cage designs are very archaic and need revision especially for felids, as they are capable of causing self-inflicted injuries that are difficult to treat later. Finally a fully equipped multidisciplinary rescue

team should be established that is able to cope up with such emergency situations.

Conclusion

The strayed tiger (which has since been named Aniruddha) is fast recovering from the trauma at the Assam State zoo. It is hoped that with proper care and attention it shall be able to regain its natural health and vigour.

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Pyometra in Leopard (*Panthera pardus*)

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An 8 year old female leopard "Pinky" weighing about 60kg owned by Nandankanan Zoo had become progressively anorectic, depressed and wet in her perineum during a 2 week period. History revealed that the leopard had not given birth to any cub. After restraining in a squeeze cage blood samples were collected. Purulent discharge was observed from vagina. A hemogram confirmed the neutrophilic leukocytosis and left shift. The hemoglobin, total leukocyte count and neutrophilic count were recorded to be 15gm/dl, 29,050/cu mm of blood and 84% respectively. The serum glucose, total protein, cholesterol and urea nitrogen values were 101.3mg/dl, 8.01gm/dl, 73mg/dl and 384mg/dl respectively.

It was decided to anaesthetize the leopard for uterine flushing. A mixture of 0.65mg of atropine sulphate, 50mg of xylazine hydrochloride and 200mg of ketamine hydrochloride was injected intramuscularly after restraining the animal in a squeeze cage. The leopard was recumbent within 10 minutes. A sterile swab was collected from vaginal discharges for culture and sensitivity. A polythene catheter of 1mm diameter was passed through the os uteri through which metronidazole infusion 50mg and povidone-iodine 5% lotion 50ml was infused into the uterus (Fig. I). 500ml of DNS 5% was injected intravenously throughout the treatment period. A constant monitoring of temperature, respiration and heart rate was done (Fig. II). Ceftriaxone sodium 1 g and metronidazole 100ml was also injected intravenously. Intramuscular ceftriazone sodium 1g was

continued for 3 more days. 5mg of Yohimbine hydrochloride was injected intravenously to revive the leopard from anaesthesia. Streptococcus, Staphylococcus, gram-negative bacilli are isolated on bacteriologic culture of the vaginal discharge. The organisms were sensitive to Levofloxacin, ceftazidime, Nitrofurazone and furazolidone. Powdered Levofloxacin (Glevo) 500mg tablets was administered orally once daily for 5 days. The animal had an uneventful recovery.

In the present case hemogram and vaginal discharge confirmed pyometra. The serum Biochemical values were within normal ranges except high urea nitrogen which may be attributed to severe dehydration and anorexia. Uterine flushing, with sensitive antibiotic, fluid therapy and parenteral antibiotic helped in recovery of the animal.

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Fig. I: Intrauterine flushing.^w

Fig. II: Intravenous infusion and monitoring.^w

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