

Problems encountered in treatment of a Hippopotamus (*Hippopotamus amphibius*)

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Even though the hippopotamus is not on the list of endangered species, its numbers have drastically reduced in last few decades. So, various conservation activities have been taken up for hippopotamus of which proper treatment is an important aspect. The present paper deals with the problems accompanied with treatment of a hippopotamus.

Case history and clinical observation

A male hippopotamus "Varun" aged about 22 years at the Nandankanan Zoological Park was found dull, depressed and anorectic by the animal keeper since last two days. Treatment by the zoo veterinarian could not improve the condition. Instead the dart remained attached to the body of the hippopotamus. Then the case was referred to the surgery department of College of Veterinary Science and Animal Husbandry, Bhubaneswar. History revealed that the water of the water body in the hippo's premises had been changed before two days. On further investigation it was found that, this time the hippopotamus had been for a little longer on the ground than usual as the cleaning of the water body took little bit longer.

Treatment and Discussion

All attempts of luring the animal with feed materials were failed. Hippopotamus is reported to be one of the most dangerous animals alive, killing more humans per year than the crocodile (Morris *et. al.*, 2001). Their bulky and clumsy appearance belies the fact that they can be very agile and can run faster than expected. So, with sufficient precautions, physical methods of restraint were also attempted but all was in vain, instead the hippopotamus became more aggressive. But there was immediate need of treatment. So, antibiotic, liver extract and multivitamin injection were administered intramuscularly. However, again the darts remain fixed to the body. So, chemical immobilization of the hippopotamus was thought of to remove the darts and to arrive at a proper diagnosis.

However, chemical restraint and anaesthesia of hippopotamus possesses significant difficulties to the zoo/wildlife veterinarian due to its large size, amphibious habits, thick skin and aggressive demeanor (Morris *et. al.*, 2001). Transient apneustia may result from administration of intravenous ketamine hydrochloride. Bradycardia and hypotension are predictable side effects resulting from the use of combination of detomidine, butorphanol and isoflurane (Morris *et. al.*, 2001). The mortality with combination of etorpine, scoline and azaperone and combination of etorpine and azaperone combination may approach 25-35% and 35% respectively. Supportive or reversal drugs have to be given intramuscularly as there are no superficial veins (Stoskopf and Bishop, 1978) are to be found in this species due to the thick skin and once established, is easily lost if a limb is moved. It is often difficult to monitor vital signs mainly due to the fact that the thick hide and large size tends to complicate visualization of respiration and cardiac auscultations. Over and above, sedation and recumbancy in hippopotamus results in hypoventilation which further leads to hypoxemia and hypercapnea (Morris *et. al.*, 2001). There are also chances that the hippopotamus may move into the water body after administration of anaesthesia which may result in drowning of the animal. There is also possibility that the dart needle may become blocked by a plug of skin. So, chemical restraint though thought of could not be performed.

However, on the next day morning it was observed that the darts were absent on the hippo's body and its condition is improving. So, the previous treatment was continued for another day. The hippopotamus had an uneventful recovery.

Being an amphibious animal, hippopotamus spend most of the day submerged in water pools and mostly defecate and urinate in water bodies. So, cleaning of the water body is essentially performed as a routine measure in zoos. The water balance of the hippopotamus gets easily disturbed when they are kept

out of water. This might be the reason for the illness of the animal. The darts might have removed from the body either due to friction with the walls of the water pool or may be due to loosening of the surrounding tissue due to movement of the animal.

A case of problems encountered during treatment of a hippopotamus is reported and discussed successfully.

References

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