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C-Arm aided recovery of a fishing slingshot dart from an Indian rock python *(Python molurus)*

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Abstract

An Indian rock python rescued by the Department of Forest and Wildlife, Government of Kerala was brought to the Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Sciences, Mannuthy. The reptile weighing 7 kg was presented in a conscious and responsive state, with a steel arrow dart gathered at its mid-length. It was sedated with ketamine @ 10 mg/kg and midazolam @ 0.2 mg/kg prior to survey radiography. The dart was penetrating the muscles just lateral to the spine, in between the ribs and covering the entire width of the coelomic cavity. The python was intubated, and anaesthesia was maintained with isoflurane. The wound was dissected to free the dart, but the reverse barb was trapped between the ribs. Hence, the shaft was unscrewed, and the barb was carefully removed, but the attempts to retrieve the arrowhead failed as it was trapped within the deep ventral muscular layers distal to the visceral organs. The trapped arrowhead was retrieved under C-Arm image intensifier assistance, and the tissue injuries were repaired in the routine manner. Postoperative antibiotic therapy was instituted, and the python made an uneventful recovery at the Wildlife Rehabilitation Centre and was released into the forest after one week.

Keywords: *Indian rock python, fishing slingshot dart, C-Arm fluoroscopy*

Inadvertent trauma to wild and feral animals and birds owing to fishing gear and discarded sharp hunting objects has often been reported in print (Sindha *et al*., 2020; Reji *et al*., 2022) and social media alike. The incidence of such mishaps has been on the rise for the past few years primarily owing to human negligence and nonchalance. Besides the vulnerable aquatic prey species, their natural predators like birds and reptiles often get ensnared or traumatised in fatal conditions by fishing gear like nets, harpoons, barbs, and the like. The animals which manage to escape from these capture devices often get stuck with the traumatic equipment, damaging their tissue or body and even leading to fatality. Most often, it requires human intervention to undo the ensnarement or entrapment.

A myriad of fishing gear and equipment is now easily available. The slingshot dart with a barbed metal head arrow is a lethal gear to capture fish, especially large catfish, eels and freshwater fish in stagnant pools and ponds. The device is a short-range effective projectile that can deeply damage tissues and is difficult to release unless manoeuvred

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Fig.1. The metallic dart found embedded in the body of the python: pre-operative image

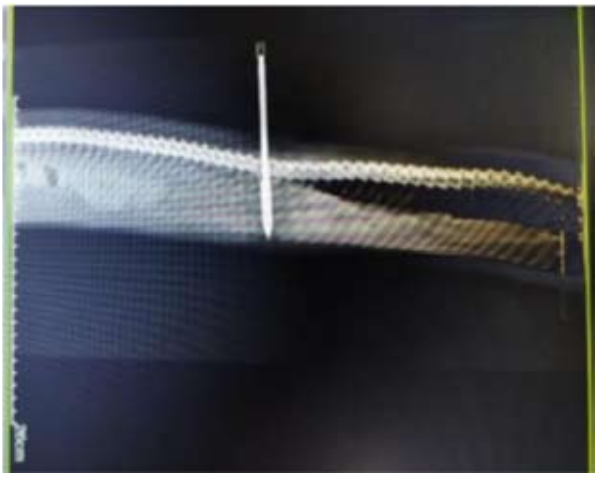

Fig.2. Survey radiograph revealing full thickness penetration of metallic dart across the coelomic cavity at proximal mid-third of the body

Fig. 3a

Fig. 3b

Fig. 3c

Fig.3. a. Python was preoxygenated with mask, **b and c**. Intubation and maintenance of general anaesthesia on isoflurane on oxygen on a Mapleson F circuit

by deft fingers on retrieval of the prey. Paddy fields and shallow ponds with stagnant water often harbour fish and easy prey for ambush predators like snakes. The Indian rock python is native to the Western Ghats and the plains. Excellent camouflage offered by its scaled pattern enables this large, sluggish reptile to easily capture unaware prey in humid grasslands and shallow water bodies. Mortality of large herpetic species like pythons owing to fishing nets has been reported in human-encroached former grasslands, water sources and wild habitats (Thathoo *et al*., 2018; Vyas and Patel, 2020). Fishing gear meant to entrap aquatic prey can thus harm unaware primary predators. This case report describes a rock python injured by a fishing slingshot barb and its rescue.

An Indian rock python (*Python molurus*) rescued by the Department of Forest and Wildlife, Government of Kerala was brought to the outpatient unit of the Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Sciences, Mannuthy. The python was conscious with normal general appearance and body condition score on presentation. The response to external stimuli was sluggish. The integument with scales and exterior surface was normal, smooth, shiny and clean. The reptile weighed 7 kg on presentation. A penetrating injury at its mid-length due to a gathered steel arrow dart was obvious on presentation (Fig.1) and had been mobile at the time of rescue, based on anamnesis. The extent of penetration of the dart was to be non-invasively assessed prior surgical intervention. The reptile was sedated with ketamine (10 mg/kg) and midazolam (0.2 mg/kg) intramuscularly for the purpose of survey radiography. The dart was observed penetrating the muscles just lateral to the spine, in between the ribs and covering the entire width of the coelomic cavity (Fig.2). Thus, it was decided to surgically retrieve the metal dart from the snake under general anaesthesia.

The python was intubated with a 2.5 mm uncuffed endotracheal tube and maintained on two per cent isoflurane anaesthesia (Fig.3). The wound was dissected in an attempt to free the dart initially. Removal of superficial tissue adhesions revealed that the reverse barb was trapped between the ribs. Hence, the shaft was unscrewed,

Fig.4. Fluoroscopic image of the trapped barbed arrowhead

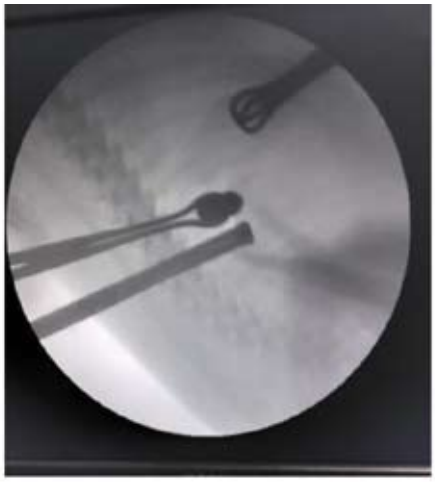

Fig. 5. Grasping the barbed arrowhead using a Babcock's forceps- fluoroscopic image

Fig.6. Retrieval of barbed arrowhead

Fig. 7. Coelomic cavity closed with absorbable sutures of Polyglactin910, size 2-0

Fig.8. Skin apposed with absorbable sutures of Polyglactin910, size 2-0

Fig. 9. The fishing slingshot dart with barbed arrowhead retrieved from the python

and the barb was carefully removed. Unfortunately, the arrowhead was still trapped within the deep ventral muscular layers distal to the visceral organs and attempts to retrieve the arrowhead failed. Hence, fluoroscopy was resorted to in order to determine the depth and orientation of the arrowhead. The C-arm fluoroscopic imaging helped to assess the orientation and position of the trapped arrowhead. It was deeply embedded and trapped in tissue layers (Fig.4). A Babcock forceps was secured around the arrowhead to prevent further rotation and torque of the sharp metallic object within the body cavity (Fig.5). The tissue layers were separated by careful blunt dissection and the arrowhead was retrieved (Fig.6). The coelom, muscular layers and skin were apposed using absorbable

sutures (Fig.7 and 8). The suture line was dressed with topical povidone-iodine five per cent solution. A single post-operative intramuscular shot of gentamicin sulphate 2.5 mg/kg body weight was administered. A shot of meloxicam @ 0.2 mg/kg was administered postoperatively for the management of pain and inflammation. No further parenteral or oral medications were prescribed. The suture site was examined daily for any festering or dehiscence and the external wound healed without complications in due course. The python showed completely normal levels of mobility, appetite and habits 72 hours postoperatively. The retrieved metallic dart was found to be intact, smooth and non-rusty (Fig.9).

The python was monitored for a week at a rehabilitation facility of the state forest department. It made an uneventful recovery and was released back into the wild.

A pioneer report on the usage of fluoroscopy to determine the location of a traumatic sharp incarcerated foreign body in a python is made in this case study. The real-time imaging was pivotal in arresting the *in vivo* torque acting on the barbed arrowhead within the body of the python. The tissue adhesions and anatomical arrangement of circular and longitudinal musculature and the depth of the coelomic cavity entrapped the barbed arrowhead.

Post-operative care and rehabilitation in the wild is important for rescued reptiles. In this case, a single shot of antibiotic gentamicin was administered immediately after surgery when the animal was fasted for 24 hours post-operatively to avoid inadvertent nephrotoxic effects of the drug (Jacobson, 1981). Analgesia was provided through a single shot of meloxicam (Hedley, 2021). Cyclooxygenase inhibitors have shown to be least toxic and more potent in analgesic and anti-inflammatory action than butorphanol in ball pythons (Duncan, 2012). The ambient temperature and humidity were mimicked to the python's natural habitat at the rescue centre.

Summary

Timely rescue and intervention to relieve a barbed fishing gear from a wild python helped in its survival and rehabilitation in this case. The employability of interventional imaging diagnostics like fluoroscopy aided the precise surgical retrieval of the dart without causing further trauma and time-lapse in wound closure and therapy. In this case, efficacious surgical intervention with congenial and safe real-time diagnostic imaging facilitated faster healing without complications in a rare case of mortal trauma in a wild python.

References

Duncan, A. 2012. Reptile and Amphibian analgesia. In: Miller, R.E. and Fowler, M. (7th Ed.) *Fowler's Zoo and Wild Animal Medicine Current Therapy*. Elsevier Saunders, Missouri, USA. pp. 250-252.

Hedley, J. 2021. Boas and Pythons. In: Kubak, M. (1st Ed.) *Handbook of Exotic Pet Medicine*. John Wiley and Sons Ltd., USA. pp. 305-325.

Jacobson, E.R. 1981. Diseases of reptiles. Part I. Noninfectious diseases. *Comp. Cont. Edu. Pract. Vet.* **3**: 122-127.

Reji, V., Laiju, M. P., Sharat, J., Praveen, M. K., David, A. and Syam, K. V. 2022. Surgical management of lacerated wounds and rehabilitation of a rescued Indian rock python (*Python molurus*): a case report. *J. Vet. Anim. Sci.* **53**: 125-128.

Sindha, P., Vyas, R. and Mistry, V. 2020. Entanglement in fishing nets: deaths of Indian rock python (*Python molurus*). *Reptiles & Amphibians*. **26**: 248-24.

Thathoo, A.K., Singh, J.L. and Tufani, N.A.2018. Necropsy and histopathological findings of an Indian Rock python (*Python molurus molurus*) died of accidental traumatic shock: a case report. *J. Entom. Zoo. Studies*. **6**: 812-15.

Vyas, R. and Patil, A. 2020. Indian rock python (*Python molurus*) rescued from fishing nets. *Reptiles & Amphibians*. **27**: 534-538.

Conflict of Interest

The authors declare that there is no conflict of interest

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