

**A CASE REPORT ON SURGICAL MANAGEMENT OF
TRAUMATIC ABDOMINAL EVISCERATION
IN A SPECTACLED COBRA (*NAJA NAJA*)**

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ABSTRACT

*Many times, snakes suffer from multiple injuries as they are frequently exposed to uneven things while crawling on the ground. Surgery is needed in many of these circumstances to minimize the disfiguring effect. The present case report presents a spectacled cobra (*Naja naja*) found injured at a construction site with severe abdominal evisceration and its successful surgical management. The surgical procedure involved repositioning of the protruded organs, clotting musculature and skin in appropriate ways, and post-operative supportive care to prevent infection. This case highlights the importance of timely intervention and appropriate techniques in treating traumatic injuries in snakes.*

Keywords: Snake, evisceration, and wound management

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INTRODUCTION

Spectacled cobras (*Naja naja*) are venomous snakes commonly found in South Asia, known for their distinctive fang markings and potent neurotoxic venom.

Instances of snake injuries, particularly traumatic wounds such as abdominal evisceration inflicted with various predators, vehicles and human interventions/building & constructions etc., are less documented. The snake requires appropriate immobilisation and anaesthesia to reduce patient stress, and work safety for handlers, especially in venomous snakes (Fowler, 1995). The wound treatment in snakes is based on cleaning the injured tissue using a warm saline solution, debridement of devitalized areas and prevention against secondary infections (Mitchell and Diaz-Figueroa, 2004). Other complementary procedures

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used to enhance the speed of lesion healing, include the use of antibacterial compounds, antiseptics and occlusive dressings (Clarck, 1980 and Amber *et al.*, 1983). The surgical management and clinical handling, along with radiography and CT would be an important aid required to evaluate the extent of internal injuries (Bidari *et.al.*, 2024). This case report aims to present clinical case findings of surgical intervention in a spectacled cobra with traumatic abdominal evisceration, discussing the wound management approach and relevant considerations in field conditions.

CASE PRESENTATION

The Veterinary Response Officer at the Veterinary Response Centre (VRC), 1962-Project, EMRI GHS, received a call regarding an injured spectacled cobra at a construction site in the Valsad district, near by Zaroli. Upon arrival, the vet of the MVD (Mobile Veterinary Dispensary) inspected and confirmed severe lacerations in the dorsal to abdominal region of the snake, leading to evisceration of abdominal organs (intestine, mesentery etc.). The snake was about 4ft in length and despite the trauma, it exhibited alertness and defensive behaviour. The wound was fresh but soiled with mud and hence slightly contaminated (Fig 1). Inj. xylazine @ 5mg/kg bw.t. I/M (Bouts and Gasthuys, 2002), was administered in cranial half of the body and the snake's head was secured in a pipe during the whole surgical procedure (Fig 2). Local anaesthesia with inj. lignocaine @ 1.5ml S/C was induced. After administration of anaesthesia, the protruded organs were lavaged with

diluted lukewarm normal saline solution, carefully repositioned, and the abdominal musculature was sutured using polyglactin 910 no. 2-0 in simple interrupted pattern. The skin and scales were closed with nylon no. 2-0 in simple interrupted pattern (Fig 3). Antiseptic bandaging was done to protect the surgical site. Post-operatively, the snake was administered with normal saline solution (NS) 20 ml subcutaneously, Inj. meloxicam @ 0.3 mg/kg b.wt. I/M, antibiotic amikacin sulphate @ 0.2 mg/kg was also given I/M and advised to continue for 3 days. Wound dressing was advised on every alternate day and an antiseptic spray was also used to prevent contamination and wound management. The snake was handed over to the local Forest Department for further management and care. The snake had uneventful recovery after 10 days of close management and care and was released in the nearby forest area.

DISCUSSION

Traumatic injuries in reptiles, especially snakes, pose unique challenges in terms of diagnosis and management. The snakes are more prone to injuries of serious nature while encountering predators e.g. mongoose, eagle, owl etc. and crushed by vehicles and human interventions / building & constructions etc. These physical injuries in snakes of traumatic origin viz., accidents, and inflicted by people trying to kill, etc., are documented and similar findings are recorded by Raut *et al.* (2008), Chaudhary *et al.* (2010), Rocha and Mota (2013) and Bidari *et.al.* (2024). The snake was restrained and anaesthetized using inj. xylazine @ 5mg/

kg b.wt. Xylazine can be used in reptiles at dosages of 0.1 to 6 mg/kg. It produces different stages of unconsciousness in reptiles, ranging from light sedation to surgical anaesthesia (Bouts and Gasthuys, 2002). Chaudhary *et al.* (2010) opined that administration of injections should be done in cranial half of the body in snakes since the body is having large dorsal musculature associated with ribs and vertebrae. Suturing of musculature was done using Polyglactin as it was favoured over catgut as reptiles lack proteolytic enzyme which will hamper absorption of catgut and may cause further complication as opined by Bennet, (1989). The skin and scales were closed with nylon no. 2-0 in simple interrupted pattern as suggested by Chaudhary *et al.* (2010). Inj. amikacin sulphate @ 1.5 mg / kg as an antibiotic was given IM and was advised a course of 3 days for post-operative care. The injection amikacin was found to be effective for combating bacterial infection and aid in early healing (Merks, 2016, Mader *et al.*, 1985, Raut *et al.*, 2008). Meloxicam was administered @ 0.3 mg/kg b.wt. i/m. Divers *et al.* (2010) opined that *inj. meloxicam* appears to be safe and effective drug and had no adverse effects at high doses in snakes. Normal saline solution 20 ml was given to restore the dehydration if any. Balanced electrolyte solution can be given subcutaneously to promote renal excretion of some agent and to aid in maintaining adequate hydration (Frye, 1981). Antiseptic spray like lidocaine, cetrimide, polyvinylpyrrolidone was useful for snakes'

injuries (Russo, 1987). Abdominal evisceration, though rare, requires prompt intervention to prevent complications such as infection, organ damage, and impaired mobility. In the presented case, the surgical approach involved meticulous handling of tissues, thorough lavage of contaminated organs, and appropriate closure techniques to ensure wound healing and minimize the risk of secondary infections. After handing over the snake to the local forest authorities, the additional post-operative supportive care, including monitoring for signs of infection and providing symptomatic treatment, was crucial for the snake's recovery, hence the snake recovered uneventfully and been then released in its home territory in nearby forest.

CONCLUSION

The successful management of traumatic abdominal evisceration in a spectacled cobra underscores the importance of timely intervention and specialized surgical techniques in reptilian medicine. Even in resource-limited field conditions, effective stabilization and recovery highlight the dedication of veterinary teams. This case emphasizes the need for standardized treatment protocols and collaboration among wildlife rescue centers and veterinary professionals, while advocating for improved access to diagnostic tools to enhance snake health and welfare.



Fig:1 Lacerated soiled wound and evisceration of abdominal content



Fig 2: Repositioning of the eviscerated organs and suturing of aseptic wound



Fig 3: Skin and scales were sutured with nylon no. 2-0 in simple interrupted pattern

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