

Case of impaled steel rod in a non-descript tom cat

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High-rise falling syndrome is very common in cats as they roam around and have a greater chance of falling from heights and getting injured (Pratschke and Kirby, 2002). High-rise syndrome is a veterinary term for injuries sustained by a cat falling from a building, typically higher than two stories (greater than 9 meters on average). Cats have probability of survival after a fall from heights because of the presence of the righting reflex. However, in rare cases, they fall on sharp objects and get impaled. This could lead to serious injury or death. Impalement injuries are those where a sharp object enters the skin or abdominal cavity of an animal due to various accidents, such as falls onto a sharp object or conflict with other animals (Matiasovic *et al.*, 2017). These injuries can be serious, often damaging vital organs, blood vessels or bones. The present report describes a case of impaled steel rod in a tom cat and its surgical management.

A 3.5-kg, non-descript, community tom cat was found impaled on a sharp railing at the entrance of a colony gate by an animal feeder. The sharp rail was cut with a grinder, and the cat was brought to the clinic for further evaluation and treatment. Upon



Fig. 1: Cat with impaled object and blood stains.



Fig. 2: Radiograph showing a radiopaque foreign object.

presentation, the cat was alert, with normal mentation and vital signs. It was in moderate pain (Pain Scale 5/10), but there was no active bleeding. Blood stains and clots were visible near the entry point of the rusted, sharp object (Fig. 1). The object had penetrated the groin area, very close to the femoral vein. The cat's mucous membranes appeared pale, likely due to shock and dehydration. Radiographs revealed that the object was lodged near the femur (Fig. 2), while abdominal ultrasonography revealed no signs of organ damage or intra-abdominal bleeding. A thoracic ultrasound was also performed to rule out haemothorax or pneumothorax, although no signs of respiratory distress were noted.

Gentle handling of the cat was carried out with minimal force to keep the patient calm while maintaining control, allowing for an assessment of the injury. To protect the staff from the feral cat and help keep it calm, Sraytrix was sprayed on the E-collar. The cat was stabilized with isotonic fluids and plasma volume expanders (Hetastarch). Additional treatments included iron extracts, ranitidine, meloxicam, and a broad-spectrum antibiotic (ceftriaxone). The patient was then prepared for surgery, with the wound site aseptically cleaned and

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prepared. A dose of tetanus toxoid was administered as part of the preparation.

Anaesthesia was induced using a combination of ketamine (4 mg/kg body wt.) and propofol (4 mg/kg body wt.) (ketofol) administered intravenously until tracheal intubation was achieved. Maintenance of anaesthesia was done with isoflurane.

The surgical approach involved making an incision on the medial aspect of the hind leg. The assisting surgeon carefully stabilized the penetrating object to avoid injury to the femoral nerve, artery and vein. The skin was incised first, followed by opening the fascia. The adductor and gracialis muscles were gently separated to expose the tip of the foreign body. The surrounding tissues were meticulously dissected until the metal tip of the object was located and carefully removed. The wound was then thoroughly lavaged multiple times with normal saline.

Layered closure was performed, with No. 3-0 chromic catgut used for muscle sutures, No. 3-0 PDS for intradermal sutures, and No. 3-0 nylon suture for the skin. A Penrose drain was placed at the lower end of the wound to facilitate drainage, anticipating potential infection. Simultaneous scrotal castration was carried out to reduce the tomcat's roaming behaviour. After the surgery, the wound was bandaged, and an E-collar was applied to prevent the cat from removing the sutures. Postoperatively, the same antibiotic regimen was continued for 5 days. On day 5, the drain was removed as no discharge was noticed, and on day 9 the sutures were removed.

The cat was then safely released back into the community.

Impalement injuries can result in penetrating wounds where a sharp object enters the body, potentially causing significant damage to deep tissues and internal organs if punctured. Such injuries can be life-threatening, especially if vital structures are involved. In this case, penetration of the femoral nerve or artery could have been fatal. Additionally, fractures from the force of the impalement are not uncommon. The key approach in managing such cases is to first carefully cut and stabilize the penetrating object, minimizing handling and movement to prevent further injury. Afterwards, the patient should be stabilized, shock managed, and the object has to be removed surgically.

Impalement injuries in animals are rare in India, with very few documented cases. This case highlights the importance of swift action and effective collaboration between animal welfare rescuers and the veterinary team to provide life-saving care to ensure complete recovery of the patient.

References

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