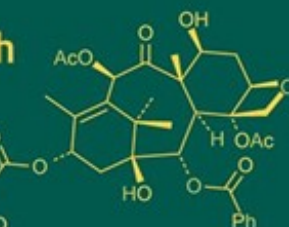
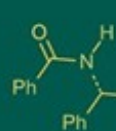


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Management of a deep maggot-infested tail base wound in a captive tigress (*Panthera tigris*)

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ABSTRACT

A 12-year-old captive tigress presented with anorexia, persistent licking, and rubbing at the base of the tail, along with signs of discomfort and depression. Clinical examination revealed a deep (approximately 8 cm) maggot-infested wound at the base of the tail accompanied by severe tick infestation and mild pyrexia (102.6 °F). The condition was managed through chemical and manual debridement, systemic antibiotic therapy, analgesics, supportive fluid therapy, vitamin supplementation, and ectoparasite control. The tigress resumed feeding by the fourth day of treatment, and complete healing was achieved within 13 days without complications. This case underscores the importance of early intervention, adherence to surgical wound management principles, and comprehensive supportive care in managing myiasis in large felids.

Keywords: Tigress, Myiasis, Wound management, Halsted principles, Wildlife medicine, Supportive therapy

Introduction

Myiasis is a common yet potentially life-threatening condition in captive wildlife, particularly in large felids where wounds may go unnoticed until advanced stages. Fly larvae infest necrotic or infected tissue, exacerbating tissue destruction and predisposing the animal to systemic infection and toxemia. Effective management requires a combination of wound debridement, antimicrobial therapy, and supportive care, alongside minimizing stress associated with handling. This report describes the successful clinical management of a deep maggot-infested wound in a captive tigress and discusses the principles guiding treatment and recovery.

Case report

A 12-year-old tigress maintained under captive conditions was observed to be anorexic, restless, and repeatedly licking and rubbing the base of the tail against the ground. Physical examination following safe restraint in a treatment cage revealed alopecia, erythema, and a deep wound measuring approximately 8 cm at the base of the tail, heavily infested with maggots. The tigress also exhibited severe tick infestation and had an elevated rectal temperature of 102.6 °F. The animal refused to consume the offered meat at the time of presentation. Treatment was initiated with instillation of turpentine oil into the wound to facilitate the expulsion of maggots, followed by manual removal of larvae and thorough cleaning of the wound. The wound was dressed using Dmag® spray (Gamma benzene hexachloride (Lindane) (0.1% w/w), Proflavine hemisulphate – 0.1% w/w, Cetrimide – 0.45% w/w, Base (vehicle and supportive components) to maintain an antiseptic environment and prevent reinfestation. Systemic antibiotic therapy was instituted using Monocef® @ 25 mg/kg along with Injection Dectomax® containing Doramectin at a dose rate of 0.3 mg/kg body weight to control ectoparasites and maggots. Pain management was achieved through administration of injection megludine at 0.25 mg/kg as a non-steroidal anti-inflammatory drug. To counteract potential gastric irritation associated with NSAID therapy, injection Rantac (Ranitidine) was administered as a gastroprotective agent. Supportive therapy included administration of Vitamin B-complex and Vitamin C to enhance metabolic activity and wound healing. Fluid therapy comprising Ringer's lactate and normal saline (NS) was administered for five days to restore hydration and electrolyte balance. Concurrently, measures were taken to control tick infestation using appropriate topical interventions. The treatment protocol was continued for 13 days with regular wound dressing and monitoring. The tigress showed gradual clinical improvement and resumed feeding on the fourth day of treatment, with complete wound healing observed by the end of the treatment period.

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Discussion

The favourable outcome in this case can be attributed to the application of fundamental surgical principles, particularly the Halstedian principles of wound management, which emphasize gentle tissue handling, removal of necrotic tissue, maintenance of asepsis, adequate drainage, and preservation of blood supply. The use of turpentine oil as a larvicidal agent facilitated effective management of myiasis by forcing the maggots out of the wound, thereby allowing their complete removal and preventing further tissue damage and toxin release. Thorough and routine wound cleaning and dressing played a critical role in preventing reinfestation and promoting the formation of healthy granulation tissue, which is essential for wound healing. The administration of systemic antibiotics such as Ceftriaxone provided broad-spectrum antimicrobial coverage, reducing the risk of secondary bacterial infection in a contaminated deep wound. Supportive therapy formed a crucial component of the treatment protocol;

Vitamin C is known to enhance collagen synthesis and tissue repair, while B-complex vitamins support cellular metabolism and recovery processes. Fluid therapy using Ringer's lactate and DNS helped in correcting dehydration, maintaining circulatory volume, and improving tissue perfusion, all of which are vital for optimal healing. Pain management using megludine ensured animal comfort, reduced stress, and likely contributed to early resumption of feeding, which was observed on the fourth day and is considered a positive prognostic indicator in wildlife cases. The concurrent use of ranitidine mitigated the risk of NSAID-induced gastric irritation, which is particularly important in anorexic animals. Minimizing stress through limited handling and efficient restraint techniques was another key factor, as stress can significantly impair immune function and delay healing in wild animals. Additionally, addressing the severe tick infestation eliminated a contributing factor to irritation and potential reinjury, thereby supporting overall recovery.



Fig. 1: Maggotted wound along with swelling on the vulva



Fig. 2: Post treatment recovery with loss of swelling

Conclusion

This case highlights that successful management of deep maggot-infested wounds in large felids requires a comprehensive approach integrating effective maggot control, adherence to surgical wound management principles, systemic antimicrobial therapy, adequate supportive care, and stress minimization. Early detection and consistent wound care are critical for favourable outcomes, and restoration of appetite serves as an important clinical indicator of recovery.

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