

An unusual case of reversible blindness associated with ophthalmomyiasis in a sow

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Abstract

Ophthalmomyiasis is a rare condition occurring when maggots feed on the orbital tissues of living organisms. Its treatment is often difficult as sensitive tissues like eyes are affected. A crossbred sow was presented with anorexia for the last 3 days, related to swelling of left eye and difficulty in movement and locating the feeding manger. Clinical examination revealed periorbital swelling, complete closure of left eye, blindness, foul odor and maggot infestation of eye socket. Treatment began with placing of turpentine oil dipped gauze over the eye and removal of maggots infesting the eye socket, followed by wound dressing. Ivermectin (0.3 mg/kg body weight S/C) once in a week (total two dosages), enrofloxacin (7.5 mg/kg I/M q72h) and meloxicam (0.5 mg/kg I/M O.D. for 5 days) were administered and the sow recovered completely after 2 weeks of therapy.

Keywords: Blindness; Maggots; Ophthalmomyiasis

Introduction

In swine population, the threat of myiasis is underestimated and still there exists a reduced awareness among farmers and veterinarians concerning the significance of preventive measures against myiasis. Ophthalmomyiasis is a rare condition occurring when fly larvae (maggots) feed exclusively on the orbital tissues of living organisms (Dunbar *et al.*, 2008). Maggoted wounds are easy to treat but their treatment can be difficult if certain sensitive tissues like eyes are affected. Treatment frequently involves removal of maggots, dressing of wound with turpentine oil or tincture of iodine and systemic administration of antibiotics and ivermectin (Rahman *et al.*, 2009; Sucilathangam *et al.*, 2013; López Millán *et al.*, 2015). This article describes successful treatment of ophthalmomyiasis in a sow.

Case History and Observation

A multiparous crossbred sow in early lactation maintained at Swine Production Farm of ICAR-Indian Veterinary Research Institute, Izatnagar was presented with anorexia for a period of 3 days, related to swelling

of left eye and difficulty in movement and locating the feeding manger. A thorough clinical examination revealed that sow had periorbital swelling, epiphora, characteristic foul odor, painful eye, itching, blindness, maggot infestation of orbital tissues and completes closure of the left eye.

Treatment and Discussion

The affected sow was suitably restrained and gauze soaked in turpentine oil was placed over the eye for 5 minutes (Fig. 1a). The maggots crawling out from the eye socket to the eye surface were manually detached with a sterile forceps (Fig. 1b, c). Ivermectin (Hitek® @0.3 mg/kg body weight S/C, two dosages at 1 week interval), enrofloxacin (long-acting, Fortivir® @7.5 mg/kg I/M q72h) and meloxicam (Melonex® @0.5 mg/kg I/M O.D.) were administered. The systemic treatment was given for 5 days; however, topical application of fly repellent and healing cream (Lorexane®) was continued for 2 weeks. After 5 days of the treatment, sow's condition started to improve, vision and feeding behavior was restored and had complete recovery by 14 days post-therapy (Fig. 2).



(a)



(b)



(c)

Fig.1 (a) & (b) Day 0: Surfacing of maggots after placement of turpentine oil gauze (c) Manual removal of maggots from the eye



(a)



(b)

Fig. 2 Recovered sow post-therapy on (a) Day 7 & (b) Day 14

In the present case, application of turpentine oil resulted in moving of maggots from eye socket. Moreover, turpentine oil stimulates antioxidant ceruloplasmin which in turn inhibits the inflammation of eye and promotes wound healing by increasing concentration of plasma fibrinogen (Moniruzzaman, 2023). Enrofloxacin was used to control the microbial infection. The administration of ivermectin yielded speedy recovery as it is a broad spectrum endectocide effective against the maggots. Ivermectin kills mature and immature parasites by blocking the nerve impulses and causing palsy and death (Rahman *et al.*, 2009).

In conclusion, this case underscores the significance of promptly addressing maggot infestations, particularly in sensitive anatomical regions like the eyes. By employing a combination of manual removal of maggots, treatment, and supportive care, veterinarians can effectively manage ophthalmomyiasis cases and facilitate the timely recovery of affected animals.

References

- Dunbar, J., Cooper, B., Hodgetts, T., Yskandar, H., van Thiel, P., Whelan, S. & Woods, D. R. 2008. An outbreak of human external ophthalmomyiasis due to *Oestrus ovis* in southern Afghanistan. *Clinical Infectious Diseases*, 46(11), e124-e126.
- López Millán, C., Olea, M. S., & Dantur Juri, M. J. 2015. Unusual presence of *Ornidia robusta* (Diptera: Syrphidae) causing pig myiasis in Argentina. *Parasitology research*, 114, 4731-4735.
- Moniruzzaman, M. 2023. A case report on maggot infestation in ruminants (cattle, goat and sheep): treatment efficacy and comparative analysis. *Chattogram Veterinary & Animal Sciences University, Khulshi, Chattogram*.
- Rahman, M. A., Hossain, M. A., & Alam, M. R. 2009. Clinical evaluation of different treatment regimes for management of myiasis in cattle. *Bangladesh Journal of Veterinary Medicine*, 7(2), 348-352.
- Sucilathangam, G., Meenakshisundaram, A., Hariramasubramanian, S., Anandhi, D., Palaniappan, N., & Anna, T. 2013. External ophthalmomyiasis which was caused by sheep botfly (*Oestrus ovis*) larva: a report of 10 cases. *Journal of Clinical and Diagnostic Research: JCDR*, 7(3), 539.