

A complicated case of orchitis and epididymitis in a dog associated with maggot infestation

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Abstract

The current case study describes the successful treatment of orchitis and epididymitis caused by a complicated maggot infestation in a 9-months-old dog weighing 32.5 kg brought to the Veterinary Clinical Complex, College of Veterinary Sciences and Animal Husbandry, Jalukie, Peren, Nagaland (CAU, Imphal). Following a clinical examination, the dog was sedated intravenously with xylazine @ 0.5 mg/kg BW, and the wound area was aseptically prepared and flushed with turpentine oil to remove the maggots manually. The wound was dressed with povidone iodine, and ivermectin was injected subcutaneously at 0.2 mg/kg BW. Later the owner complained about an enlarged scrotum with an open wound. The clinical examination revealed orchitis and epididymitis condition, which was corrected by castration procedure, and the dog recovered simultaneously after 5 weeks. It was also concluded that castration is the only method to prevent orchitis and epididymitis.

Keywords: Dog, Epididymitis, Maggots, Orchitis

Highlights

- Maggot infestation may lead to orchitis and epididymitis.
- Early detection simultaneously effective treatment may prevent these conditions.

Myiasis is a condition in which living tissue is invaded by maggots. The flies lay small white larvae on the dog's cracked skin, frequently wiggling and moving (Hollinger, 2016). Orchitis is an inflammation of one or both testicles or testes. It can be unilateral or bilateral, but unilateral is more common (Brum, 2015). Epididymitis, on the other hand, is an inflammatory condition of the testicular tubes that can occur with or without orchitis (Park, 2015). Acute pain is present, and the infected dog may become ill, exhibit fever, lethargy, inappetence, doughy scrotum and excessive licking of the inflamed area (Robert, 2017). Chronic epididymitis can cause a reduction in the size of testicles and an irregular appearance

of the surrounding soft tissues (Troedsson and Dickson, 2021). Both conditions can be dangerous and must be treated properly. Orchitis and epididymitis are both serious conditions that can occur in dogs (Farrar, 2020). Gram negative bacteria such as *E. coli* are the most common cause, most likely through ascending infection (Robert, 2017). Except in immunocompromised animals, *Brucella canis* infection is a low-risk zoonosis (Kyle and Davidson, 2021).

A 9-month-old dog weighing 32.5 kg was brought to the Veterinary Clinical Complex, College of Veterinary Sciences and Animal Husbandry, Jalukie, Peren, Nagaland (CAU, Imphal). The case report discusses the treatment

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of orchitis and epididymitis, complicated by maggot infestation in a dog. On clinical examination, the dog was found to be weak, lethargic, and dehydrated. On examination of the infected region, the scrotal area was found to be inflamed with an open wound infested with maggots. On palpation, the animal manifested sign of severe pain (Fig. 1a). The rectal temperature was normal (100°F). The condition was diagnosed as orchitis and epididymitis as a result of maggot infestation based on the clinical symptoms.

Following a clinical examination, the dog was first sedated intravenously with xylazine @ 0.5 mg/kg BW, and then the wound area was aseptically dressed using normal saline and povidone iodine, later flushed with turpentine oil to remove the maggots. After dressing, a shot of ivermectin was injected subcutaneously @ 0.2 mg/kg BW, and a shot of Dexona injection @ 1 mL was also given. Two days later, the animal was brought with a complaint that the wound was getting worse. On examination, it was found that the scrotum and the testis were severely inflamed, and the size of the open wound was also increased. Hence, it was concluded that castration was the ultimate line of treatment to save the dog. Atropine @ 0.02 mg/kg BW was administered intramuscularly to the dog, diazepam @ 0.01 mg/kg BW was administered intravenously as a pre-anaesthetic drug and propofol @ 0.1 mg/kg BW intravenously for sedation to perform surgical procedure and simultaneously both the inflamed testicles and epididymis were removed aseptically (Fig. 1b). During the surgical procedure, 500 mL of normal saline intravenous fluid was given. The owner was advised to seek post-operative care with adequate fluid therapy for 5 days, and in order to avoid secondary infections, ceftriaxone

injection @ 15 mg/kg BW intravenously given twice daily for 5 days, meloxicam as an analgesic agent given @ 0.5 mg/kg BW intramuscularly once daily for 3 days and then supplemented by Tribivet injection @ 3 mL once daily for 5 days. Penetrat tablet @ 1 tablet once daily for 5 days was also given to hasten the wound healing process. The incision site was regularly dressed with povidone iodine, and Mupirocin ointment was applied topically twice daily for a week. The surgical wound was healed completely within 5 weeks. (Fig. 1c)

In the current study, the animal was in an acute condition, with severe pain, fever, lethargy, inappetence, and doughy scrotum with excessive licking of the inflamed areas. In a maggot infestation, when turpentine oil is poured into the infected wound for 6 to 8 hours, the larvae emerge out (Mehta, 2013). Similar findings were found in the current study. When orchitis and epididymitis occur in the same animal, castration is the primary treatment (Autumn, 2020).

Castration is the only way to avoid orchitis and epididymitis in cases of maggot-infected testicular wounds; it is also learnt that early identification and treatment are crucial to prevent future complications.

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Author's contribution: NB: Carried out the treatment, performed the surgery and routinely monitored the case, draft and revision of the manuscript; TG: Post-operative care, draft, collection of references and revision of the manuscript; KM: Draft, collection of references and revision of the manuscript; KK: Carried out the treatment, routinely monitored the case and revision of the manuscript.

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(a)



(b)



(c)

Fig. 1. Orchitis and epididymitis in a dog (a) before, (b) during and (c) after treatment

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