Abstract

The present communication reports one case of scrotal dermatitis in a buck and its successful management. A seven-year-old Malabari buck from an organized farm was presented with a complaint of skin lesions on the scrotum and refusal to mount. The scrotal skin was severely affected with circumscribed scab formation. Cultural examination of skin scabs revealed presence of *Dermatophilus congolensis*. Polymerase chain reaction was performed to confirm the diagnosis. On the basis of the results of culture and sensitivity the animal was treated with Inj. Enrocin (Enrofloxacin) at a dose rate of 10 mg/kg IM for three days, Inj. Lavitone-H (Vit A, D₃ and E) 3 ml IM total dose and topical application of a mixture of glycerine and tincture iodine.

ABBREVIATIONS

PCR: Polymerase Chain Reaction

INTRODUCTION

*Dermatophilus congolensis* is the principal causative agent of dermatophilosis. In goats, many pathogenic bacterial, viral, fungal and parasitic agents can cause dermatological problems. Dermatophilosis is identified as one of the common bacterial diseases that are associated with dermatitis in goats [1]. The disease is characterized by exudative dermatitis with scab formation, lameness and difficulty in mounting [2]. The present paper deals with the successful management of scrotal dermatitis caused by *D. congolensis*.

CASE PRESENTATION

Case history and observation

A seven-year-old Malabari buck from an organized farm was presented with a complaint of circumscribed dry skin lesions on the scrotum, poor quality semen and refusal to mount. The entire flock comprising of eight bucks was managed for breeding purpose. It was physically sound with a normal appetite and all the vital parameters were normal. On clinical examination the scrotal skin was severely affected with circumscribed thick scab formation (Figure 1). The rest of the flock had milder lesions which healed with topical clindamycin gel, whereas for the buck mentioned in this case report clindamycin gave no convincing results. The skin lesions on the scrotum were dry, circumscribed and gave away while trying to peel it (Figure 1). On removal of the dried scab material, the animal evinced intense pain. The base of the scab was embedded into the skin and some purulent material was evident. No ectoparasites were observed.

Diagnosis and treatment

The scabs were collected in sterile containers aseptically. Isolation of organism was done by inoculating the scab in blood agar and incubating it at 37 °C in the presence of 10 percent carbon dioxide. After 24 hours of incubation hemolytic colonies characteristic of *D. congolensis* were evident. After 48 hours both greyish white pinpoint colonies and medallion type colonies were evident. The isolate was sensitive to enrofloxacin and resistant to clindamycin, amoxicillin clavulanate, ceftriaxone tazobactam and tetracycline. On the basis of the results of culture and sensitivity the buck was treated with Inj. Enrocin (enrofloxacin) at a dose rate of 10 mg/kg body weight IM for 3 days.
three days and supported by Inj.Lavitone-H (Vit A, D₃ and E) 3 ml IM total dose for three days and topical application of a mixture of glycerine and tincture iodine was advised till healing was evident. Improvement was noticed in about one week post treatment and complete recovery was seen after two weeks (Figure 2). A loop full of the isolate was sub cultured in brain heart infusion broth and left for incubation at 37 °C overnight. Two ml of the suspension was centrifuged at 1000 rpm for ten minutes. The supernatant was discarded and the pellet was resuspended in PBS for DNA extraction. Extraction of DNA was done using the High Pure PCR Template preparation Kit (Qiagen, Germany), according to the manufacturer instructions. PCR was performed targeting a 500 bp fragment of the 16S rRNA gene of *Dermatophilus congolensis*. The primer pair, forward primer 5’-ACATGCAAGTCGAACGATGA-3’ and reverse primer 5’-ACGCTCGCACCCTACGTATT-3’ [3] was used to amplify the region of interest with minor modifications [4]. Five micro liter of the PCR product was loaded with the gel loading dye, against a 250 bp DNA ladder and electrophoresis was performed at 70V for one hour. The agarose gel was visualized under a UV transilluminator and documented in gel documentation system (Figure 3).

**DISCUSSION**

In goats the lesions of dermatophilosis are generally distributed around the ears, nose, oral commisures, scrotum and distal parts of the limbs [5]. A breach in the skin barrier along with a high relative humidity enables maturity and motility of zoospores making this a predisposing factor for the dissemination of the [6]. A hyperemic area with purulent material was evident on removal of the scab which is in accordance with the report of [7]. Stress and concurrent diseases compromising the immune system, moisture, rainfall, tick infestation and mechanical injury are the predisposing factors to this disease [8]. Dermatophilosis significantly influences the semen quality and thereby has a huge impact on an economic aspect. Topical treatments sometime fail because, the thickness of the crusts prevent the drug from coming into direct contact with the infected areas [9]. The disease is having a zoonotic significance and human infections generally follow after having a minor skin trauma. There are also reports of a dairy farm volunteer in Spain contracting the infection [10]. Closed confinement, hot and humid condition and persistent moisture due to regular washing of premises might have predisposed the bucks to dermatophilosis. The present communication emphasizes on timely diagnosis and appropriate treatment of dermatophilosis as it is highly contagious, has a role in public health and can be transmitted to humans.

**REFERENCES**