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Case Report

A Herd Outbreak Study On Contagious Ecthyma (ORF) Occurrence in Thanjavur Black Goats

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Abstract

A study on the occurrence of contagious ecthyma in Thanjavur black goats was done in Livestock Farm Complex, Veterinary College and Research Institute, Orathanadu in September 2023. Scabby proliferative dermatitis and pustular lesions on the commissures of the lips, ulcerative lesions on the tongue, gums, inner side of the lips, and lesions on the teat were observed in 36 goats out of the 42 animals maintained. Streptopenicillin 2.5g at the dose rate of 1ml/25kg body weight, anti-inflammatory drug metamizole sodium (Analgin) at the dose rate of 2 ml per animal, and antihistamine drugs chlorpheniramine maleate at the dose rate of 0.5mg /kg body weight was given intramuscularly for five days. The lesion was washed with a 1% potassium permanganate solution and a paste prepared with one part of boric acid and two parts of glycerine was topically applied on the lesions twice daily for 10 days to completely heal wounds.

Keywords: Contagious Ecthyma, Thanjavur Black Goats, Therapeutic Management.

Introduction

Contagious ecthyma (ORF) is an acute, highly contagious and economically important zoonotic viral skin disease of small ruminants caused by parapox virus in the family of poxviridae (Murphy *et al*., 2012.The disease more severely affects goats than sheep and leads to decreased productivity. According to Ramesh Kumar *et al*. (2022), goats have a greater morbidity rate (8.75 to 100%) than sheep (0 to 8%). The disease generally occurs with high morbidity as the transmission is from infected animals to susceptible animals. ORF is pandemic in distribution and outbreaks have been noticed during late summer fall and winter on pasture and in feedlots (Nagarajan *et al.*, 2019).

Case History and Observations

Livestock Farm Complex of Veterinary College and Research Institute, Orathanadu is maintaining a goat unit with Thanjavur Black goat. Out of the 42 goats maintained on the farm, 36 animals were dull, depressed, and partially anorectic with scabby proliferative dermatitis lesions on the commissures of the lips. This condition was observed during September 2023. Severely affected goats had fissures, pustular lesions on lips, ulcerative lesions on the tongue, gums, and inner side of the lips, along with putrefied odour from the mouth. In lactating, goats, lesions were also found on the teats. Based on the symptoms, physical examination, and presence of lesion the case was diagnosed as contagious ecthyma (Orf). The morbidity and mortality observed were 85.7% and 0% respectively.

Fig 1: Ulcerative lesions on the tongue

Fig 2: Fissures and pustular lesions on lips and muzzle

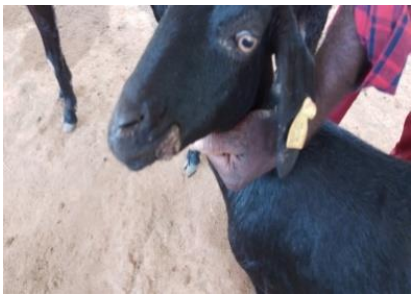

Fig 3: Scabby proliferative lesion on commissure of the lips

Treatment and Discussion

All the affected animals were isolated and treated with the anti-inflammatory drug meloxicam at the dose rate of 0.5 mg/ kg body weight, antibiotic enrofloxacin at the dose rate of 5 mg/ kg body weight and antihistamine drugs chlorpheneramine maleate at the dose rate of 0.5mg /kg body weight intramuscularly for three days (Brahma *et al*., 2020). The lesion was washed with a 1% potassium permanganate solution and a paste prepared with boric acid and glycerine and was topically applied on the lesions twice daily (Sowmiya *et al*., 2022)**.** The goats did not show any significant improvement in this treatment and the lesions started to spread to nose, tongue and dental pad. The antibiotic was changed to streptopenicillin 2.5g at the dose rate of 1ml/25kg body weight, anti-inflammatory drug was changed to metamizole sodium (analgin) at the dose rate of 2 ml per animal to minimize the secondary bacterial infection. This intervention showed drastic improvement in the clinical condition and the lesions and scabs started to regress. The parenteral administration of meloxicam, streptopenicillin and chlorpheneramine maleate was continued for five days. Topical application of boric acid and glycerine was continued for 10 days for complete healing of wounds.

Among the 36 infected goats, one animal was severely affected with fissures, pustular lesions on lips, ulcerative lesions on the tongue, gums, and inner side of the lips, along with putrefied odour from the oral cavity and elevated body temperature (40.2ºC). Due to severe ulceration and necrosis the animal was totally anorectic. This case was further supported with 100 ml of Ringer lactate and 100 ml of 5% dextrose normal saline intravenously and B-complex intra muscularly along with the treatment and the animal started to take feed after two days of treatment. The animals were not sent for grazing until the complete healing of the wound. Subabul, neem, and agathi were fed to the animal indoor. Since it is a self-limiting viral disease the aim of the treatment was to reduce the severity of the lesion, to minimize the chance of getting secondary bacterial infection and speedy recovery as the uncared cases may result in severe systemic reaction like gastro enteritis and bronchopneumonia (Radostits *et al*., 2007).

Conclusion

The present study concluded that early diagnosis and symptomatic therapeutic management helps to resolve the condition early in the flock minimizing the economic loss to the farmers. Since the disease is self-limiting, complications due to secondary bacterial infection can be well managed by the use of antibiotics and anti-inflammatory drugs along with topical therapy.

Contribution by Authors

Equal contribution. All authors declared that 'written informed' consent was obtained from the approved parties for the publication of this article and accompanying images.

Conflict of Interests

There is no conflict of interest.

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