

Review Article

A REPORT ON OUTBREAK OF BLUE TONGUE IN ERODE DISTRICT OF TAMILNADU

R. Yasothai

Veterinary University Training and Research Centre,
Tamilnadu Veterinary and Animal Sciences University,
Erode – 638 004, Tamil Nadu, India.
E-mail: yasothairamalingam@gmail.com

Abstract: The present study deals with an outbreak of blue tongue in Erode District of Tamilnadu. During 2004–2008, mortality among sheep and goats in Erode District was investigated. The animals were examined individually and the clinical manifestations were recorded along with history of disease incidence. During blue tongue outbreak a total of 1388 sheep were affected with a mortality of 239 sheeps. Sheep was highly prone to bluetongue with a mortality rate of 17.2% when compared to cattle and goat. Blue tongue disease occurred during the month of November and December in Erode District when heavy rainfall conditions makes congenial environment for the multiplication of vectors *Culicoides* sp.

Keywords: Blue tongue, Sheep, Mortality, Season.

INTRODUCTION

Bluetongue, is one of the most important arthropodborne, infectious diseases of sheep in Southern India (Sreenivasulu and Subba Rao, 1999). It is caused by a RNA containing Orbivirus of Reoviridae family. Twenty four antigenic strains of the virus have been identified, which vary in their pathogenicity. It is spread through blood sucking midges of the genus *Culicoides* and was more pronounced during the monsoon season when the vector population is more (Wilson Aruni *et al.*, 1999). Factors such as unrestricted animal movement, rain fall, geographical location, and multiple serotypes have made the control of the disease difficult (Shasidhar *et al.*, 1998). In Tamilnadu, Erode District ranks first in total sheep population (5,06,015) (17th Quinquennial Livestock Census-2004) and outbreak of any disease in sheep causes severe economic loss to the livestock farmers of the district. Hence information on the season of the disease occurrence, area and species most affected by blue tongue based on previous outbreaks are very useful for the disease forecasting. The present study deals with an epidemiological pattern of blue tongue in Erode District of Tamilnadu.

MATERIALS AND METHODS

During 2004 – 2008, mortality among sheep and goats in Erode District was investigated by the technical staff of Veterinary University Training and Research Centre, Erode and Animal Disease Intelligence Unit, Erode. The morbid animals were examined and the clinical manifestations were recorded along with history of disease incidence.

RESULTS AND DISCUSSION

The result revealed that a total of 1388 sheep were affected with a mortality of 239 sheep. The disease caused an average mortality of 17.2% in sheep, with highest mortality rate of 18.8% during December-2005 and a lowest mortality rate of 14.2% during December-2004 could be attributed to the heavy rainfall during these months, which would have favoured the multiplication of vectors *Culicoides sp.*. The morbidity and mortality rate recorded during the present outbreak were less compared to the previous outbreaks reported by Wilson Aruni *et al.* (1999).

The affected sheep showed the clinical signs of fever (40.5°C - 41°C), mucopurulent nasal discharge and frothy salivation with rhinitis and stomatitis, edema of lips, gums, dental pad and tongue, necrotic ulcers on lateral side of tongue leads to difficulty in swallowing of feed, and diarrhoea. Some of the affected sheep showed foot lesions such as laminitis, coronitis and dark red skin band just above the coronet. On 10th to 12th day wryneck seen in affected sheep's due to stiffness of muscles. During this period, partial or complete loss of wool, cracking of hooves were observed. The clinical signs recorded during the investigation were in accordance with Hungerford (1990).

The clinical form of the disease was only seen in sheep. Infection in cattle and goat was not noticeable. This observation was in agreement with Sreenivasulu and Subba Rao (1999). The history and the clinical signs recorded were suggestive of blue tongue.

The affected animals were isolated and treated with antibiotics. Oral cavity washed with 1% potassium permanganate solution and boric powder in cocunut oil was applied. Affected animals fed with porridge of rice, ragi and kambu, resulted in recovery of affected animals.

Past outbreaks in Tamilnadu recorded in 1987, 1997, 1999 and 2001 (Wilson Aruni *et al.*, 2001) were during North – East Monsoon. The present outbreak also occurred during November and December when heavy rainfall with water stagnation, which would have favoured the multiplication of vectors (*Culicoides sp.*).

CONCLUSION

Based on the present investigation, it is concluded that the sheep was highly prone to bluetongue with a mortality rate of 17.2% when compared to cattle and goat. The disease generally occurred on the month of November and December during heavy rainfall which makes congenial environment for the multiplication of vectors.

ACKNOWLEDGEMENT

The authors are thankful to the Assistant Director, Animal Disease Intelligence Unit, Erode for his co-operation during the investigation.

REFERENCES

- [1] Hungerford, T.G. (1990). Diseases of Livestock. 9th edn. Mc Graw Hill Book Company, Sydney. pp. 912.
- [2] Shasidhar, N., Panduranga, G.L., Sastry, K.N.V. and Krishnappa, G. (1998). Certain aspects of epidemiology of bluetongue in migratory sheep population in Karnataka. Indian Veterinary Journal, 75: 683-686.
- [3] Sreenivasulu, D. and Subba Rao, M.V. (1999). Occurrence of bluetongue in Andhra Pradesh. Indian Veterinary Journal, 76: 461-462.
- [4] Wilson Aruni, A., Babu, M., Palaniswamy, K.S. and Ebenezer, D., (1999). A report on bluetongue in Tamilnadu. Indian Veterinary Journal, 76: 953-955.
- [5] Wilson Aruni, A., Jayapal, G. and Kathirchelvan, M. (2001). Report on combined outbreak of bluetongue and sheep pox in Sivagangai District. Indian Veterinary Journal, 78: 1-3.