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An outbreak of contagious ecthyma (Sore mouth) in indigenous Assam hill goat: A report

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Abstract

An outbreak of contagious ecthyma virus infection in goats was reported in Livestock Farm, ICAR Research Complex for NEH Region, Umiam, Meghalaya. The outbreak occurred suddenly in few animals of Assam Hill young goats and spread rapidly to entire flock with symptoms of papules formation and progress rapidly to vesicles, pustules, and scabs initially in lips and mouth and then other parts of the body like face, ear and teats. The infected animals were treated regularly for five days using systemic antibiotics and then recovered gradually with healing of wounds. However no mortality was reported in the outbreak.

Keywords: Outbreak, contagious ecthyma, assam hill goat, poxviridae

1. Introduction

Contagious ecthyma, is a zoonotic disease, which means that it is easily transmitted from animals to humans also known as pastular dermatitis, infectious labial dermatitis, sore mouth and scabby mouth (Jones *et al.* 1997) ^[1], is a zoonotic disease. This disease is called as Orf when it occurs in human beings (Gourreau *et al.* 1986) ^[2]. It is a viral disease, which affects sheep, goats and other domesticated and wild ruminants. Usually the morbidity of the disease may reach 100% and mortality due to secondary causes may reach 15% or less. Contagious ecthyma in young sheep and goats caused by family Poxviridae and genus Parapoxvirus with worldwide distribution. It occurs less commonly in human beings, cattle, wild ungulates and dogs (Hargis and Ginn, 2001) ^[3]. The infection is generally confined to the squamous epithelium and may involve the oral cavity, eyelids, teats, and coronary band, subsequently predisposing affected animals to secondary infections. Young kids and lambs are more prone to the disease after a few weeks of birth. Susceptible animals usually show clinical symptoms of the disease 4 to 7 days after exposure that persists for 1 to 2 weeks or for longer periods. The disease initially starts with papules (elevation of the skin) that progress to blisters (fluid-filled pouches). These lesions are generally found in the skin of the lips and can spread around outside and inside of the mouth, face, lips, ears, vulva, scrotum, teats and usually in the interdigital region of feet. In some cases extensive lesions on the feet can lead to lameness in adults and young animals. The infection is spread by direct and indirect contact from infected animals or by contact with the infected tissue or saliva containing the virus. During the course of the disease, blisters eventually break down to release more of the virus and later develop into wet pus-like (Suppurative) scabs. These lesions can persist for 2 weeks and can become a site for the development of secondary bacterial infections. Scab tissues are extremely painful which prevents sick animals from taking feed, infected kids present lesions on their gums and lips from which does and ewes can acquire lesions on their udder. The lesions on the udder are due to direct contamination during nursing that causes mastitis in does and ewes. Most animals acquire immunity after suffering from the disease but subsequent outbreaks in herds are common with a less severe form of the disease.

2. Case history and clinical observations

The animals were raised under semi-intensive system in slatted floor. They were allowed for open grazing for five hours and then brought for stall feeding. Contagious ecthyma lesions were very painful and can result in anorexia or even starvation. Young animals refused to nurse and lesions on the udder of the dam caused it to abandon its offspring. An outbreak of contagious ecthyma virus infection in goats was reported in Livestock Farm, ICAR Research Complex for NEH Region, Umiam, Meghalaya. The outbreak was initially reported in few

animals of Indigenous Assam hill goat and spread rapidly to entire flock affecting a total of 118 numbers of goats with symptoms of papules formation and progress rapidly to vesicles, pustules and scabs initially in lips, mouth, face and ear affecting 95 numbers and remaining 23 numbers of animals were affected with lesions in teats. Skin lesions progress in an orderly fashion through multiple stages: erythema, macule, papule, vesicle, pustule, scab, and scar (Haig and Mercer, 1998 [4]. Murphy *et al.* 1999 [5]. Deane *et al.* 2000 [6]. Anderson *et al.* 2002 [7]. Lesions were also observed on teats of adult milking does around the muzzle and nose of young goats. In some animals pus was observed after removal of the scabs while dressing.

3. Diagnosis

Diagnosis was made mainly on the basis of clinical symptoms and characteristics location of the lesions as well as a herd history of previous outbreaks.

4. Treatment

Infected animals were separated from the flock and kept in a separate shed and grazing was not allowed till the complete healing of wounds. The affected animals were initially treated with regular dressing by using 5 % Povidine iodine solution (Povinanvet, Nanz Med Science Pharma Pvt. Ltd. Rampur Ghat, Paonta sahibi (H.P) and local application of fly repellent ointment (Himax oint., Indian Herbs, Specialties Pvt. Ltd.) followed by administration of a course of broad spectrum systemic antibiotic viz., Ceftriaxone sodium (Intacef inj 250mg, Intas Pharmaceuticals) @ dose rate of 10 mg/kg body wt. to prevent secondary bacterial infection. The infected animals were treated regularly for five days with antibiotics and cured gradually with healing of wounds and normal grazing. Out of 118 numbers of affected animals, 95 numbers were recovered within two weeks and remaining 25 numbers of animals with lesion in teats were treated to prevent the development of the mastitis recovered within three weeks, however no mastitis was reported. Infected unweaned kids were fed artificially with dam's milk or cow's milk.

5. Prevention and Control

To prevent contagious ecthyma from entering an uninfected herd, new animals introduced should be quarantined and minimize the transportation stress. Precautions should also be taken to prevent virus introduction on equipment and other fomites. The removal of harsh vegetation from pastures or feed may reduce the risk of cuts in the mouth or on the muzzle. Orf virus is difficult to eradicate once it has entered in a flock or herd. Isolation of infected animals may help to prevent virus spread during outbreaks and fomites (e.g., troughs and feeders) should be cleaned and disinfected before reuse. It is always required to feed and treat the sick animals after feeding the herd. Attenuated virus vaccines are commercially available. In endemic areas, annual vaccination at 6-8 weeks old kids or lambs is recommended. Avoid the consumption of milk from the infected animals that present lesions on the teats and udder. Contagious ecthyma vaccines contain live virus and should be used only on premises where infections have occurred in the past. Recently vaccinated animals should be isolated from unvaccinated animals until the vaccination scabs have fallen off. A systematic vaccination of the entire herd is recommended only during outbreaks. The person always needs to wear gloves when

handling sick animals and vaccines as humans can contract the disease. It is very important to incinerate gloves and all tissues that come in contact with lesions extracted from sick animals.

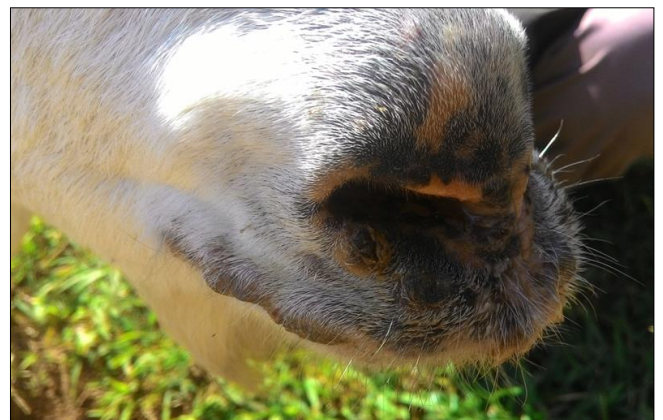


Fig: Proliferative scab lesions on the skin of lips, muzzle and nostrils

6. Conclusion

An outbreak of contagious ecthyma virus infection in goats occurred in Livestock Farm, ICAR Research Complex for NEH Region, Umiam, Meghalaya. The outbreak occurred suddenly in few animals of Assam Hill young goats and spread rapidly to entire flock with the virus specific symptoms. The infected animals were treated regularly for five days using systemic antibiotics and then recovered gradually with healing of wounds.

7. References

1. Jones TD, Hunt RD, King NW. *Veterinary Pathology*, 6th Edition, Lippincot William and Wilkins, Baltimore, 1997.
2. Gourreau JM, Mornet M, Gressin R, Fraisse J, Gourvil JC, Lesouple C. *et al.* Orf: Recontamination 8 months after the original Infection. Review of the literature apropos of a case *Dermatol, Venereol.* 1986; 113:065-1076.
3. Hargis AM, Ginn PE, *Integumentary System.* In: Thomsons Special *Veterinary Pathology* McGavin MD, carlton WW, and Zachary JF, (Eds). Mosby, Inc., London, 2001.
4. Haig DM, Mercer AA. "Orf," *Veterinary Research.* 1998; 29(3-4):311-326.
5. Murphy FA, Gibbs EPJ, Horzinek MC, Studdert MJ. *Poxviridae in Veterinary Virology* Academic Press, San Diego, Calif, USA, 3rd edition. 1999; 289-291.
6. Deane D, McInnes CJ, Percival A. Orf virus encodes a

- novel secreted protein inhibitor of granulocyte-macrophage colony-stimulating factor and interleukin-2, *Journal of Virology*, 2000; 74(3):1313-1320.
7. Anderson DE, Rings DM, Pugh DG. Diseases of the integumentary system, in *Sheep and Goat Medicine*, D. G. Pugh, Ed. W.B. Saunders Company, Philadelphia, Pa, USA, 1st edition. 2002; 203-204.