

CONTAGIOUS ECTHYMA IN SMALL RUMINANTS

Kanika Tiwari¹, Jyotsana Bhatt²

¹PhD Scholar, Department of Veterinary Surgery & Radiology,
College of Veterinary and animal Sciences, G.B.P.U.AT, Pantnagar

²Teaching Personnel, Department of Veterinary Surgery &
Radiology, College of Veterinary and Animal Sciences, G.B.P.U.AT,
Pantnagar

Contagious ecthyma also known as Orf, scabby mouth, sore mouth, contagious pustular dermatitis, infectious pustular labial dermatitis, is a highly contagious skin disease of goat and sheep, characterized by localized proliferative and persistent skin nodular lesions. This disease was first recognised in Great Britain in year 1928. In India, disease was first reported in year 1932. Earlier, people believed that it is a self-limiting disease. At present, it has spread worldwide and is endemic in India. Goats are often more severely affected than sheep. However, unvaccinated kids, lambs and older lambs are more susceptible to the disease than adult goat and sheep. This disease may occur at any time of year but more common in summer, fall and winter seasons. It is an emerging zoonotic disease. Veterinarian and animal handler may get infection from the infected animal. In this way, the disease has significant effect on livestock and human health which leads to economic losses to the farmers.

ETIOLOGY AND TRANSMISSION

The disease is caused by parapoxvirus of family Poxviridae. Virus may enter the host through abrasions on the skin of the lips and face, produced by thistles, prickles or similar plants. Disease transmitted through direct contact with an infected animal and indirectly from contaminated equipments, feed trough and bedding. Nursing kids may spread the infection to the udders of susceptible does. The virus remains viable on the skin for approximately one month after the lesions have healed. After the lesions has healed, scabs

that fall on the ground also act as a source of infection. Carrier animals can also spread the disease particularly during the time of stress. The virus remains viable on the skin for approximately one month. Although, it can survive for months to years in cool, dry environments. However, it is destroyed by high and low temperatures. Humans may become infected if they have direct contact with animal lesions and through contaminated fomites, hence the disease considered as occupational zoonosis.

SYMPTOMS

- Proliferative and persistent skin nodular lesions occur in three forms - generalized, labial and mammary or genitals. It can manifest as benign and malignant type. Malignant type of orf can remain persistent and is fatal and causes serious outbreak among small ruminant population.
- Most important symptom of this disease is presence of blister like lesions typically on mouth and muzzle. These lesions appear around 4-8 days after the exposure of animal to the virus. They appear as papules and progresses as vesicles, pustules and ulcer in 3-4 days. After few days, lesions appear as crusty scabs.
- Initially, animal is dull, depressed, anorectic and has fever (106-108°F). There is profuse salivation, lacrimation and mucopurulent nasal discharge.
- Occasionally, lesions can also be seen on other parts of the body such as teats, udder, feet (around the coronet) and genitals of both sexes.
- Some lesions are severely painful which may prevent them from eating. Does which have lesions on their teats won't allow kids for nursing. This leads to starvation and malnutrition.
- If treatment is given, then it may heal within a month. However, if not treated at appropriate time, then secondary bacterial infection may invade on the affected teat which may sometime results in mastitis in does.
- Lesion on the feet may cause lameness in the animals.
- Immune system of animals also plays an important role as animal having strong immune system will recover more faster and those animals having weak immune system may show more severe signs of disease.
- In humans, the disease is seen as a cutaneous lesion in hand and forearm with mild clinical outcome.



Nodular lesions in mouth and muzzle of the animals



TREATMENT

- Morbidity rate is very high (>90%) particularly in young unvaccinated animals. Fatality rate is low (1-2%) but may be seen due to secondary infections, stress, immunosuppression and concurrent disease.
- Affected kids require good nursing care to ensure that they are eating and drinking.
- Antibiotic treatment may be required if does and ewes develop mastitis.
- Affected area should be cleaned with potassium permanganate solution and betadine liquid and should be properly dried to prevent secondary bacterial infection and maggot infestation. Application of 5% copper sulphate solution has been suggested after removal of scab.
- Udder salves containing petroleum jelly and glycerine may be used to soften the scab on teat.
- Systemic antibiotic, antipyretic and analgesic is highly recommended in case of secondary bacterial infection.
- Wound should be treated for maggot infestation and fly repellent should be used over the wounded area.

DIAGNOSIS

- It is mostly based on the history of animal contact and characteristic clinical findings.
- Molecular tests are used to confirm the clinical diagnosis. Polymerase chain reaction (PCR) and electron microscopy are the diagnostic method of choice for contagious ecthyma.
- Orf lesions are differentiated with foot and mouth disease and blue tongue by the clinical signs of crusty scabs as compared to erosions and ulcerative lesions.

PREVENTION

- New animal entering the herd should be quarantined for 3-4 weeks before mixing with healthy animals on the farm.
- Infected animal should be immediately isolated to prevent spread of disease.
- Pans should be cleaned and disinfected regularly.
- Routine surveillance and infection control measures should be done for prevention of infection.
- There is an urgent need for effective vaccine to enhance the eradication strategies for contagious ecthyma in India.
- Veterinarians and animal handler should take protective precautions and wear separate working cloths along with disposable gloves while handling the infected animals.



AGRI-BUSINESS CERTIFICATION PROGRAM

POWERED BY IMPERIAL SCHOOL OF AGRI BUSINESS



Sachin Gurjar,

(ISAB Student of FABM 2021-23 Batch)

Eligibility : UG 3RD / 4TH/ Passed out students of agriculture & allied sciences

Benefit of ACP : 1. Knowledge about Sales & Marketing tools & techniques
2. Better career/placement options and growth prospects

For Registration Please Visit : www.isab.org.in

Last Date : 10th June 2022

NOTE : REGISTRATION IS FREE FOR ALL STUDENTS

RECRUITERS AND ASSOCIATIONS



SCAN ME



Scan the QR Code to Register using PayTM or any Scanner Mobile Application

Training Experts for AGRI-BUSINESS CERTIFICATION PROGRAM (ACP)



MR. SAURABH K PANDEY

Co-Founder & Director, ISAB
Alumnus: GBPUA&T and IIM Ahmedabad



MR. ARUN ALBERT

Head - Learning & Development, O. P. Jindal Global University
Alumnus : Delhi University



DR. AGYEYA TRIPATHI

ESG Consultant & Social Auditor
Visiting Faculty at DMI Patna, XIM University
Alumnus: IBS Hyderabad



DR. DINESH JAIN

Asst. Professor, Entrepreneurship Development Institute of India
Alumnus: IIM Ahmedabad



MRS. NEHA SAINI

Certified Career Counsellor
Visiting Faculty at MANAGE Hyderabad, IABM Bikaner, IRMA Gujarat
Alumnus : MANAGE Hyderabad & BIT Mesra



A Premier Agri-B School
An initiative of IIM Ahmedabad Alumnus

**CAMPUS ADDRESS - Knowledge Park III,
Greater Noida, Uttar Pradesh**

CONTACT - +91-8319400485, +91-7440977485

Email - events@isab.org.in | www.isab.org.in

FOLLOW US ON

