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Lecture title: Ulcerative Lymphangitis

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Summary:

Synonyms: Ulcerative Lymphangitis (UL) ulcerative cellulitis, caseous lymphadenitis, big leg.

Definition: UL is a mild contagious disease of equines and cattle, that is caused by *Corynebacterium pseudotuberculosis* and characterized by inflammation of subcutaneous lymphatic vessels, especially of the lower limbs.

History: The disease was first described in 1664

ETIOLOGY

The causative bacterium *is Corynebacterium pseudotuberculosis biotype 2*, Gram-positive rod, non-spore forming, and non-capsulated, non-motile and soil-borne organism.

EPIDEMIOLOGY

Distribution:

- 1. UL is widely distributed

Transmission and mode of infection:

- 1-Spread of infection results from environmental contamination and the presence of skin abrasions (especially in the lower limbs), contaminated bedding and grooming tools.
- 2- Insects are also involved in transmission.

3. Susceptible hosts:

- UL primarily affects horses, mules, donkeys and cattle.

Factors influencing susceptibility:

- Bad hygienic conditions such as overcrowding and dirty, unhygienic stables are predisposing factors for infection.

Economic importance of the disease:

- UL decreases the capacity of the animals to work.

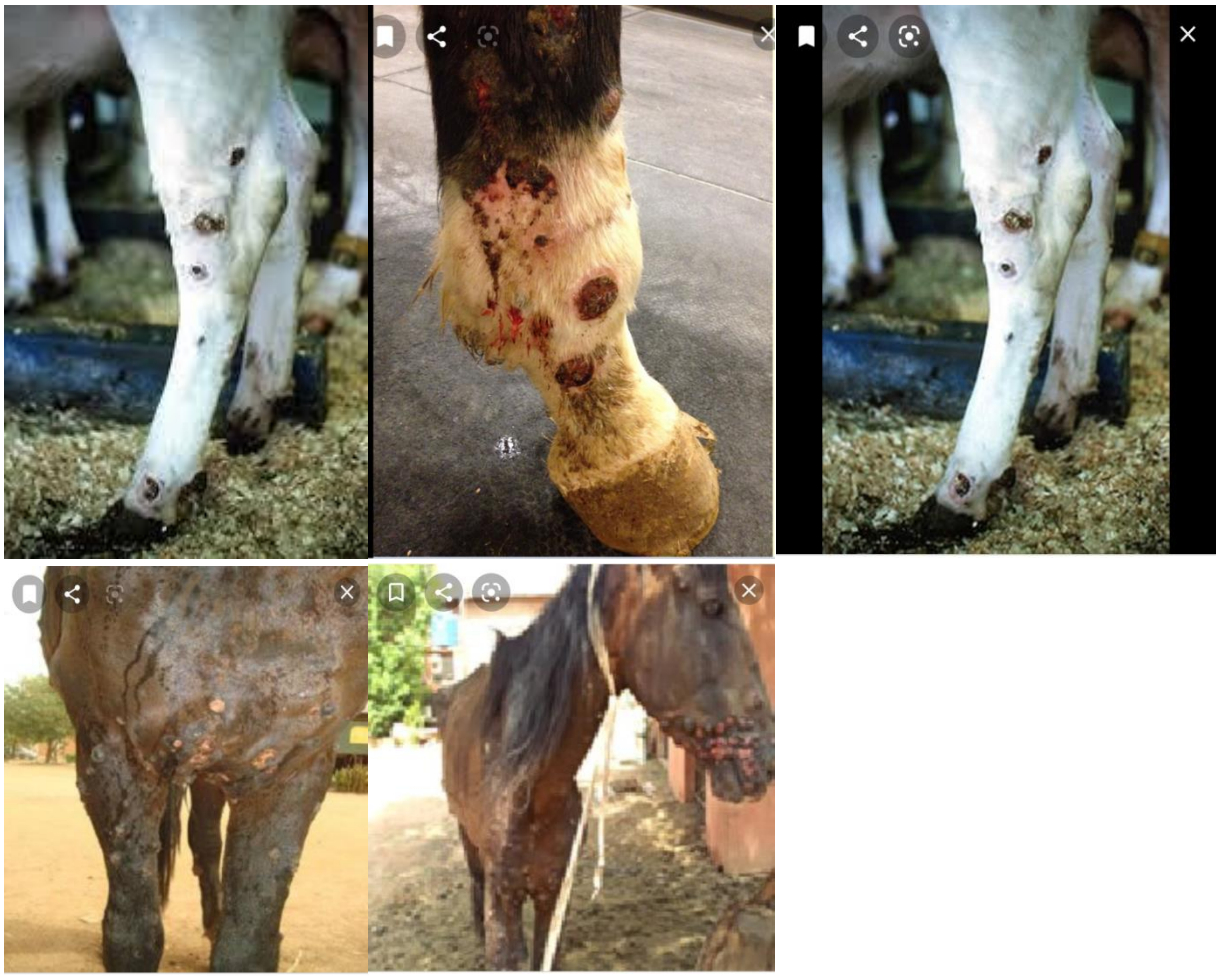
Pathogenesis:

Infection of skin abrasions and wounds, followed by invasion of local lymphatic vessels and the development of abscesses along their course. Lymph nodes are usually not involved in horses.

CLINICAL FINDINGS

- A- There is a long IP, relatively high morbidity and no mortality, with a long course of disease.
- In horses, the hind legs from the hock down are the most common sites.
- The affected limbs are swollen, hot, painful, and usually associated with lameness.
- Nodules develop in the subcutaneous tissue, especially around the fetlock and sometimes spread all over the body.
- These lesions may enlarge to 5-7 cm in diameter and rupture, discharging a **creamy green pus**, which may be blood stained.
- Draining lymphatic vessels become enlarged and hard and may develop secondary ulcers.
- The lesions may heal within 2-3 weeks but new lesions usually develop

B. In cattle the lesions are similar to those in horses except that there may be lymph node involvement lymphangitis enlargement and the ulcers discharge a gelatinous clear exudate



Diagnosis:

1. Field diagnosis: UL is suspected in horses from clinical signs and lesions of the - lower limbs. Edematous skin disease in cattle is suspected from the season, and clinical signs such as suppuration and painful swelling of the superficial lymph nodes.

.2. Laboratory diagnosis: Specimens for laboratory use:

Swabs of pus from the lesions, especially during early stages of infection. Laboratory diagnosis depends on:

A. Stained smears from clinical material.

B. Isolation of the organism from lesion swabs on blood agar and identification based on culture characteristics, stained culture smears and biochemical reactions (catalase positive and fermentation of glucose with acid production).

Animal inoculation such as the mouse protection test and skin sensitivity test, as well as inoculation in susceptible calves.

There are no serological tests validated for the infection.

Differential diagnosis:

A. UL should be differentiated from other diseases causing skin lesions in equines, such as Epizootic lymphangitis demonstration of *Histoplasma captulatum var. farciminosum*, cutaneous Glanders (the mallein test) and from Sporotrichosis.

B. In cattle and buffalo, UL or edematous skin disease should be differentiated from other diseases causing skin lesions in buffalo and cows such as

Lumpy skin disease,

Skin tuberculosis,

Cutaneous stephanofilarosis and Bovine nocardiosis.

Treatment

A. Local surgical treatment of ulcers and irrigation with iodine based antiseptic fluid, followed by oxytetracycline dressing.

B. In severe cases, Parenteral injections of penicillin 10000-20000 IU/Kg B.W/ 5-10 days or tetracycline 10-20 mg/ Kg B.W may be necessary

The antibiotics must be followed by surgical treatment for ripening and evacuation of the abscesses.

Prevention and control

Ulcerative Lymphangitis In endemic areas, control depends on:

- good hygiene in stables
- careful disinfection of Injuries to the lower limbs
- All cases of UL should be isolated with special care taken in the disposal of wound dressings.