

## Lightning stroke & Electrocution الصدمة الكهربائية وضربة البرق

- The main common causes are flashes of linear lightning during thunderstorms, broken overhead electrical transmission wires which usually carry very high voltages and faulty electrical wiring in cowsheds and barns.
- In lightning stroke, trees, fences, barns, and pools of water may become electrified and it is not unusual for damp ground to act as a conductor for electricity passing along the roots of stricken trees.
- Electrical transmission wires are most dangerous when they fall into pools of water, as they are likely to do during the storms which bring the wires down. In such cases, the entire pool is electrified and animals passing through it may be killed instantly.

### Pathogenesis ...

1-Tissue damage from electrical trauma is induced by the direct effects of the electric current and the development of heat and tissue ischemia.

2-Exposure to high-voltage electrical currents causes severe nervous shock with complete unconsciousness and flaccid paralysis. In some instances, focal destruction of nervous tissue occurs and residual signs of damage to the nervous system persist after nervous shock disappears.

3-Death when it occurs is usually due to paralysis of vital medullary centers. Ventricular fibrillation may also occur and contribute to the fatal outcome.

### Clinical findings ...

1-Varying degrees of shock occur and the animal may fall dead without a struggle

2-burns are likely to occur because of the severity of the shock. The burns may be localized to the muzzle or feet and be in the form of radial deposits of carbon with or without disruption of tissue

3-When the animal is removed from the electric field, the animal may rise and be perfectly normal or show depression, blindness, ataxia, posterior paralysis, and cutaneous hyperesthesia.

4-Sloughing of the skin at the sites of burns may occur after a few days

### Treatment ...

Central nervous system stimulants and artificial respiration should be provided for unconscious animals, with symptomatic treatment .

## **Fleece rot in sheep**

It's a disease develops as an exudative dermatitis following wetting of the fleece by rain. it caused by the growth of toxigenic strains of *Pseudomonas aeruginosa*, resulting in dermatitis and change of wool coloration .

Epidemiology ...

- 1-The disease occurs in sheep only in wet seasons, when prolong rain fall is required for this condition to occur .
- 2- Young sheep are more susceptible than old and differences in fleece characters affect the susceptibility of individual sheep
- 3- The disease is of economical importance

Pathogenesis ...

With prolonged wetting, the conditions of high humidity in the fleece will occur ,and the availability of rich nutrients from serous exudates, allow the proliferation of opportunistic skin and fleece bacteria including *Ps. aeruginosa*, which liberated its dermonecrotic toxin and pyocyanin result in dermatitis and change in wool color with bad odor

Clinical findings ...

- 1- Lesions occur most commonly over the withers and along the back.and the wool can detached easily.
- 2- The skin is inflamed and a serous exudates produces bands of matted and colored fibers across the wool area .
- 3- The coloration of the fibers is commonly green, but may be yellow, yellow-brown, or red-brown.
- 4- The general health of the sheep is unaffected in typical fleece rot but severe ulcerative dermatitis with mortality were recorded .

Treatment ...

- 1- shearing of the wool and applying a mixture contain zinc and aluminum oxides with and fatty acids.
- 2- systemic antibiotics