

RABIES IN CATTLE

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Rabies in South Africa is a fatal viral disease affecting the brain of warm-blooded animals. In domestic animal, cattle seemed most prone to become infected. All suspect cases should be handled with care and avoid contact with saliva. Gloves should be worn when examining the mouth.



RABIES IN JACKAL

(Canis mesomelas)

BLACK-BACKED JACKAL

- The black-backed jackal is one of the chief disseminators of rabies in the northern and northwestern parts of the country. Jackal rabies epidemics occurred in cycles of approximately 8-10 years. During outbreaks, 3-5 cattle may die on a farm but can reach 30 or more. In one epidemic about 1 000 or more cattle died in the 1980s.
- In 60% of the cases in the Northern Province where rabies was con-



firmed in cattle, jackals with an abnormal behavioral pattern were seen before the onset of symptoms in cattle.

- Rabid jackals were often encountered at watering places where they attacked cattle. Cases where a so-called “tame” jackal was seen wandering aimlessly around, later becoming aggressive and even killing domestic animals or attacking humans without provocation, were also described.
- In farming areas, 60% of the jackals were encountered at or in farm buildings. Almost 50% were aggressive and 37% attacked humans or farm animals.
- The main victims of jackal rabies are cattle, as there is a significant association between cattle and jackal cases.

The following clinical signs were observed in cattle:

HYDROPHILIA

Sick animals were often found near watering points. Animals would repeatedly unsuccessfully attempt to drink water by submerging their muzzles in the water. (Early onset of pharyngeal paralysis).

RESULT: Emaciation, dehydration, extreme craving for water.

SALIVATION

Terminal stages of rabies showing excessive salivation. In most cases, salivation was observed, more often only a slight dribbling rather than copious salivation. “Bone in the throat syndrome” – farmers exposed to rabies while trying to assist animals.

BELLOWING

A characteristic hoarse to high-pitched bellow. Continuous bellowing for variable periods and

also attempts to bellow, without producing any sound were observed. Hence the Afrikaans name “bulksiekte”. (Bellowing disease).

COMPLICATIONS

Vomiting of ruminal contents, subcutaneous emphysema resulting from pulmonary emphysema.

AGGRESSIVENESS

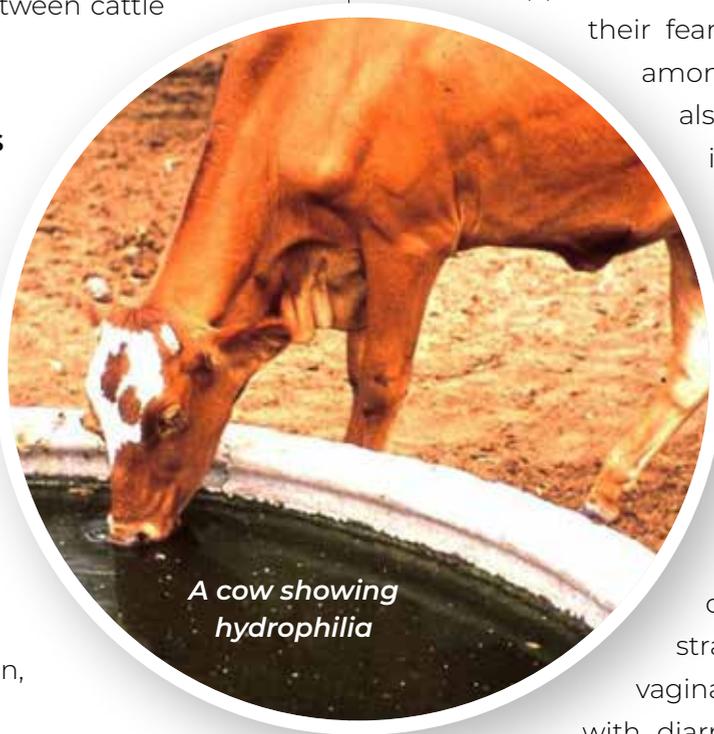
Cattle usually manifested some form of aggressiveness. Only a few were really vicious. Most animals turned aggressive only on provocation. Rabid cattle could be approached with ease and seemed to lose their fear of human beings. Fighting amongst bulls and butting was also observed, while in other instances animals would make vicious attacks on inanimate objects such as fence posts, drinking troughs etc.

STRAINING

This clinical sign was constantly observed and was often interpreted by stockmen to be some form of constipation. Between bouts of straining air was drawn into the vagina and/or rectum. Tenesmus with diarrhoea and frequent urination. Hindquarters soiled with dark-coloured faeces. (Tail paralysis). Farmers confused this clinical sign with the typical straining often seen during parturition.

PSEUDO-OESTRUS

Pregnant and non-pregnant heifers and cows showed signs of oestrus. Continuous attempts were made to mount other cattle.



A cow showing hydrophilia



Terminal stages of rabies showing excessive salivation

PARALYSIS

The animal initially shows locomotory disturbance which most often starts in the hindquarters.

- Typical “knuckling” of the fetlock. (Often the left hindleg).
- “Lameness” of the hindquarters.
- Swaying of the hindquarters.
- Posterior paresis, dragging of the hooves.
- Animals become progressively paralysed, comatose and die. (Cattle usually die within 3-6 days after onset of clinical signs).
- In the terminal stages of the disease, there is usually total paralysis in all the extremities.

The following has been observed in a paralysed animal in lateral recumbency:

- Continuous bellowing.
- Straining
- Chewing movements and profuse salivation. (A pool of saliva may form around the mouth).
- Muscular twitching of facial and other muscles.

Conditions that can be similar to rabies in cattle:

1. Heartwater
2. Botulism
3. Poisoning
 - 3.1. Lead poisoning
 - 3.2. Organophosphate poisoning
 - 3.3. Chlorinate poisoning
 - 3.4. Plant poisoning
 - Tulp/Urginea spp.
 - Solanum kwebense
 - Albizia
 - Dipcadi glaucum
 - “Kweek tremors”
 - Dichapetalum cymosum
 - Cynanchum
 - Sarcostemma
 - Melia azedarach
 - Cestrum
 - 3.5. Fungal poisoning
 - Aspergillus clavatus
 - Diplodia maydis

4. Cerebral Redwater (Babesia bovis).
5. Meningitis and Encephalitis as sequelae to dehorning. Brain abscess.
6. Oesophageal obstruction.
7. “Bone-in-the-throat” syndrome.
8. Cerebral Anoxia
9. Abscessation: Lung abscess, heart abscess, traumatic reticulitis (aggressiveness), epidural abscess as a result of lumbar trauma.
10. Lumbar trauma.
11. Bovine Ephemeral Fever (Three-day stiff sickness).
12. Deficiencies-Thiamine Deficiency (Feedlots).



VACCINATION

During outbreaks, cattle can be vaccinated successfully to prevent further losses.

RABIES IN YELLOW MONGOOSE

(*Cynictis Penicillata*)



The Yellow Mongoose is the major wildlife vector of rabies in South Africa, accounting for up to 70% of the total number of non-domestic rabies-positive cases diagnosed.

Sporadic isolated cases of Mongoose rabies in cattle are diagnosed in the central highveld regions of the country. ■