EPIZOOTOLOGY AND CLINICAL FEATURES OF BOVINE THEILERIOSIS

Yerimbetov O.P.
lecturer, Nukus Veterinary and Medical Technical School
https://doi.org/10.5281/zenodo.18295533

ARTICLE INFO

Received: 15th January 2026
Accepted: 16th January 2026
Online: 17th January 2026

KEYWORDS

theileriosis, cattle, Theileria, Hyalomma, clinical signs.

ABSTRACT

The article describes the causative agent of bovine theileriosis, its epidemiological distribution, and the clinical manifestations of the acute and subacute forms of the disease under the conditions of Karakalpakstan..

Introduction.

In the peripheral blood of animals affected by theileriosis, *Theileria* parasites are observed in various morphological forms, including round, oval, dot-like, rod-shaped, comma-shaped, and anaplasma-like forms. Under the conditions of Karakalpakstan, round, oval, and dot-like forms were predominantly detected. Blood smears stained by the Romanovsky–Giemsa method revealed that the parasites ranged in size from 8 to 20 μm; their cytoplasm stained light blue, while the nucleus appeared red. From 1 to 7 parasites, most commonly 2–3, were observed in a single erythrocyte, and the degree of erythrocyte infection reached 60–90%.

Epizootological characteristics. The causative agent of the disease is transmitted by ticks belonging to the genus *Hyalomma*. Under the conditions of Karakalpakstan, the two-host tick *Hyalomma detritum* and the three-host tick *Hyalomma anatolicum* are of primary epizootological importance. Tick attacks on animals occur both on pastures and in livestock housing facilities. Due to the adaptation of these ticks to living in animal shelters, cases of transmissive infection are also recorded when animals are kept indoors.

The disease occurs mainly during the warm seasons of the year. In farms where *H. detritum* is widespread, theileriosis is observed from late April to September, whereas in areas where *H. anatolicum* is prevalent, the disease persists from March to October, with peak incidence in June–July (Q. Orifjonov, T. Rakhimov, A. Gafurov).

Clinical signs. Bovine theileriosis occurs in acute and subacute forms. The acute form is mainly observed in animals introduced from other farms and is characterized by a 2–4-fold enlargement of the peripheral lymph nodes, especially the prescapular and supramammary nodes, which are firm and painful on palpation. Within 1–3 days after the onset of lymphadenitis, body temperature rises to 41 °C or higher, appetite decreases, and milk production is reduced. Affected animals exhibit rapid weight loss, decreased activity, increased thirst, hyperemia of the mucous membranes, and petechial hemorrhages.

Changes in the cardiovascular and respiratory systems are observed, including an increased pulse rate (80–120 beats per minute) and respiratory rate (40–80 breaths per minute), visible pulsation of the jugular vein, dry cough, lacrimation, and cases of abortion in pregnant cows.

In the subacute form, the disease lasts for 2–3 weeks and is characterized by a wave-like increase in body temperature. The mucous membranes are initially hyperemic and later

become pale with numerous petechial hemorrhages. Intestinal peristalsis is initially increased, leading to diarrhea, which is subsequently replaced by constipation due to the development of intestinal atony.

In severe cases, depression of cardiac activity may develop, resulting in death. The mortality rate of theileriosis reaches 50–65%. In local cattle breeds, the disease usually progresses in a milder form, and recovery is more frequently observed.

Conclusion. Under the conditions of Karakalpakstan, bovine theileriosis has a pronounced seasonal pattern, and the course of the disease largely depends on the distribution of tick vectors. Early diagnosis and timely implementation of preventive measures are essential for reducing the impact and consequences of the disease..

References:

1.Ashirbek, A.A., Zhanabayev, A.A., & Mukhambetkaliev, E.E. (2020). Treatment of theileriosis in the Turkistan Region. In Proceedings of the International Scientific and Practical Conference “Modern Trends and Achievements in the Fight against Zooanthroponoses of Farm Animals and Poultry” (pp. 58–62). Makhachkala: Caspian Zonal Research Veterinary Institute – Branch of FGBNU “FANTS RD”.

2.Boybulov, B.Sh., & Soatov, U.R. (2021). Methods of prevention and treatment of blood-parasitic diseases and resistance to them on the example of the Bushuev breed of cattle. Journal of Veterinary Medicine, Tashkent, No. 11, pp. 26–28.

3.Bursakov, S.A. (2021). Theileriosis of cattle. Veterinariya, No. 3, pp. 34–36.

4.Bakirov, B., Daminov, A., et al. (2019). Blood-parasitic diseases. In: Animal Diseases. Reference Manual (Textbook). Samarkand, 552 p.

5.Bursakov, S.A., & Kovalchuk, S.N. (2018). Distribution of bovine theileriosis in the Moscow Region. Agrarian Scientific Journal, No. 12, pp. 9–12.

6.Boskhamdzhiev, S.G., & Matveev, A.A. (2012). Biology and distribution of ticks of the genus Hyalomma in Kalmykia. Bulletin of Kalmyk University, No. 3 (15), pp. 13–17.