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ETIOLOGICAL FACTORS CAUSING PURULENT DISEASES OF CATTLE HOOVES, AND THEIR CLINICAL SIGNS

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ABSTRACT

A total of 2,100 head of cattle of livestock farms in the regions of the Republic of Karakalpakstan and the Samarkand region revealed 167 heads of 7.9% of cows with hoof pathology, of which 38 animals had circular hoof phlegmon and this accounted for 22.7% of this total hoof pathology, in 54 heads (32.3%), hoof phlegmon was detected and a maximum of 75 heads (45%) of the animals had primary and clinical manifestations of the lamellar layer of the hooves, and in all animals with the processes of hoof pathology, the hoof part of one foot is injured, the hooves swell during phlegmonous processes, there is a strong pain, animals at rest keep injured legs slightly bent, severe lameness is observed when walking.

KEYWORDS: *Phlegmon Of The Hoof Circumference, Soft Phlegmon Of The Hoof, Lamellar Layer Of The Hoof, Capsular Phlegmon, Regeneration, Erosion And Deformation Of The Hooves, Tendonitis And Tendavaginitis, Pododermatitis, Phlegmon, Panaritium, Deformity Of The Hooves, Purulent Inflammation Of The Hoof Joints.*

INTRODUCTION

It is noted that the main cause of a number of diseases arises as a result of keeping, feeding, caring for and using new species of animals at the disposal of the newly created livestock farms of the country. In addition, in recent years, the disturbance of the ecological balance in our region, the deterioration of the composition of soil, water and plants also leads to the emergence of various diseases, including diseases of the fingers.

In recent years, many highly productive heifers from European countries have been brought to our country and distributed to farms specializing in animal husbandry. It should be noted that in order to provide healthy care for imported pedigree livestock, to obtain high-quality and environmentally friendly dairy and meat products from them, livestock premises must comply with zoological standards, have pastures and access zones must comply with veterinary and sanitary requirements.

The Holstein-Friesian breed is a large number of highly productive heifers imported from abroad. Almost in all regions of the country, feed complexes have been built for them without special screeds. These cows have a high milk yield and increase milk yield. Diseases of the distal part of the foot, i.e. the toes, have become a serious problem for many farmers and limited liability companies. Therefore, the prevalence of this pathology, the study of its etiopathogenesis is one of the urgent problems.

Foot diseases account for 20% of all non-communicable diseases of dairy cows on dairy farms [1].

In LLC "The Red Star" in the Ulyanovsk region of the Russian Federation, the incidence of cow fingers was 23.8%, and the highest incidence of animal diseases was recorded from April to June [4,5,6].

Improper flooring in lactating cows can lead to leg injuries, tendinitis and tendavaginitis, pododermatitis, phlegmon, panaritium, hoof deformities, purulent inflammation of the hoof joints and other diseases [2,3].

On farms, especially on livestock farms of cattle, purulent inflammation of the ankle joints is common among animals, which causes great economic damage to farms. For example, the frequency of purulent arthritis in cows is 6%, with a milk yield of 50%, and in fattening cattle - an increase in body weight by 20-30 kg per head and a decrease in the growth rate by 28-30% [7, 9].

The process of adaptation of imported cows to the conditions of our region is difficult, especially in winter and spring, when the complexes have high humidity, lack of pastures, poor conditions on pastures, lack of macro- and microelements in the diet and untimely clipping of hooves leads to the development of various diseases of fingers and hooves. A study of the hooves of sick cows showed that softening of the cornea was especially pronounced on the hind limbs: 84% of infected animals had injuries to the hind limbs and 16% had injuries to the front limbs [8].

Place, object and research methods. The cows of the "Panayiv Farmis" farms of the Republic of Karakalpakstan and "Pure milk", "Siab Shavkat Orzu" and "Tolkin Shizhoati" in the Akdarya district of the Samarkand region underwent clinical examination. At the same time, mainly dairy cows were examined using general and special methods. In clinical studies, the body temperature

of animals, the number of breaths and heart rate per minute, general condition, the location of the pathological lesion and the mechanism of the disease were studied.

The results obtained and their analysis. As a result of scientific research and experiments to determine the etiopathogenesis of suppurative inflammation of the distal part of the foot in livestock farms in the country, it has been established that the factors causing purulent inflammation of the hoof are different, that is, the mechanical factors arising in the hoof. For example, when the body is weakened, especially in winter, some physiological impressions, body secretions can also cause inflammation. Another factor causing the development of purulent inflammation in the distal part of the hooves of cattle was the ingress of microorganisms into the interstitial gland through the wound as a result of the action of various mechanical factors leading to the development of purulent inflammation, as a result of which the development of purulent pathological processes in the hoof area was revealed.

Studies have shown that the deeper the hoof injuries, the more severe the complications. In particular, the gassipol toxin in nutrients obtained during the processing of cotton, which is added to their diet in winter, is a substance that disrupts metabolic processes in the body and causes a toxic-allergic state, which leads to a decrease in immunobiological properties.

Studying the etiopathogenesis of purulent inflammation of the distal parts of the toes in cattle, among cattle present in livestock farms in our country, they are more common in pathology of the distal foot in the hoof, round leg and wrist joints. Due to the peculiarities of pedigree cattle hooves in our country, the development of modern methods of treatment and prevention of purulent inflammation of the hooves is of great scientific and practical importance.

When a surgical clinical examination of 2,100 cows was carried out at the "Panayiv Farmis" dispensary of the Republic of Karakalpakstan and "Pure milk", "Siab Shavkat Orzu" and "Tolkin Shizhoati" in the Akdarya district of the Samarkand region, 7.9% of cows have 167 heads in their hooves identified phlegmon around the circumference of the hooves, soft hoof phlegmon and diseases of the hoof laminate.

During a clinical examination of 200 animals from "Panayiv Farmis" farms in the Republic of Karakalpakstan, 14 heads (7%) were diagnosed with hoof pathology, including 3 heads (21.4%) of cows with hoof phlegmon, 4 heads (28.6 %) of animals the hoof is soft phlegmon and in 7 heads (50%) of cows hoofed laminitis was noted. Clinical examination of 1100 animals from the "Pure milk" farms in Akdarya district of Samarkand region revealed hoof pathology in 82 heads (7.5%), including 21 heads (25.6%) of cows with hoof phlegmon, in 27 heads (32.9%) animals were diagnosed with soft hoof phlegmon, 34 heads (41.5%) cows had hoof laminitis.

During the medical examination of 800 animals from the farm "Siyob Shavkat Orzu" of Akdarya district of Samarkand region, 64 (8%) were diagnosed with hoof pathology, including 14 heads (21.9%) of cows with hoof phlegmon, 20 heads (31, 2%) animals showed soft hoof phlegmon and 30 heads (46.9%) cows had hoof laminitis.

Clinical examination of 76 animals from 7 farms (9.2%) of the "Tolkin Shizhoati" livestock farm in Akdarya district of Samarkand region revealed hoof pathology in 7 heads (9.2%), including 3 heads (42.8%) of animals hoof phlegmon and in 4 heads (57.2%) of cows hoof laminitis.

It was noted that when inspections were carried out throughout the year, they were mainly observed during the winter and spring months. The main reason for this is the high humidity in the places where animals are kept and the lack of certain minerals and vitamins in the diet.

When a surgical clinical examination of 2,100 cows was carried out at the "Panayiv Farmis" dispensary of the Republic of Karakalpakstan and "Pure milk", "Siab Shavkat Orzu" and "Tolkin Shizhoati" in the Akdarya district of the Samarkand region, 7.9% of cows have 167 heads in their hooves identified phlegmon around the circumference of the hooves, soft hoof phlegmon and diseases of the hoof laminae. Of these, 38 heads of animals were diagnosed with circular phlegmon of the hooves, which accounted for 22.7% of the general pathology of the hooves, soft phlegmon of hooves was recorded in 54 heads (32.3%) of animals, and a maximum of 75 heads (45%) of animals were diagnosed with laminitis. Hoofs, it was initially noted that there are clearly visible processes.

In animals with hoof pathologies, general weakness, increased body temperature, an increase in the contour of the hoof, contraction of cutaneous diverticula of the hoof, and severe pain on movement are manifested. Redness and local increase in temperature were noted on palpation of the injured hoof, limitation of hoof movement. The animal carefully steps on the ground with an injured hoof. The area around the hoof was swollen and reddened, with open wounds in some parts. A cyanotic purulent exudate flows from the puncture site of the wound.

TABLE 1 THE INCIDENCE OF PURULENT DISEASES OF COW HOOVES IN LIVESTOCK FARMS

s/n	The name of a farm specializing in animal husbandry.	Number of heads of reared cows on the farm	Sick animals		Phlegmon of the hoof circle		Phlegmon of soft hoof		Hoof laminitis	
			number	%	number	%	number	%	number	%
1	Livestock farm "Pure milk" in Akdarya region	1100	82	7,5	21	25,6	27	32,9	34	41,5
2	Livestock farm "Panayiv Farmis" of the Republic of Karakalpakstan.	200	14	7	3	21,4	4	28,6	7	50
3	Livestock farm "Siab Shavkat Orzu" in Akdarya region	800	64	8	14	21,9	20	31,2	30	46,9
4	Livestock farm "Tolkin Shizhoati" in Akdarya region	76	7	9,2	-	-	3	42,8	4	57,2
5	Total:	2100	167	7,9	38	22,7	54	32,3	75	45

In all animals that underwent the processes of phlegmon of the circumference of the hooves and soft hooves, the hoof part of one foot was injured, and the hooves that underwent phlegmon were swollen and severely painful. When the animal is at rest, the hoof rests on a slightly bent injured leg. When walking, severe lameness is observed, animals throw their injured legs to the ground, and the support is limp.

In animals, weakness, an average increase in body temperature of 0.5-1.0, the injured hoof is enlarged relative to the opposite foot and the loss of skin elasticity, as a result of the accumulation of pus in the hoof, it increases and contracts, the bulges of the hooves are difficult to feel, the arms are thickened, elasticity is passive movement of the lowered, injured hooves are limited and there is severe pain when the hoof is moved along the ground.

With soft hoof phlegmon, the size of the hoof increases and the inflammatory swelling spreads from the hoof capsule to the joint. The hoof span widened and hoof asymmetry was observed. The injured area is hot, tense and very painful to palpation. The animals' body temperature increased and their general condition worsened, and a strong limp appeared when moving. Some animals have discharge from the roundness of the hooves and soft hooves, and a bluish pus is secreted.

CONCLUSIONS

1. As a result of inspections, it was found that a total of 2,100 cows belonging to livestock farms in the regions of the Republic of Karakalpakstan and Samarkand region were infected with hoof pathology during surgical examination of 167 heads of 7.9% of cows, of which 38 animals had phlegmon hooves and this amounted to 22.7% from the general pathology of the hooves, 54 heads (32.3%) of the animals underwent soft phlegmon of the hooves and a maximum of 75 heads (45%) of the animals underwent processes in which the initial and clinical manifestations of layered hoof laminitis were evident.

2. In all animals with hoof girth and soft processes of hoof phlegmon, hooves of one foot are injured, hooves with phlegmon processes are edematous, severe pain is observed, when standing, animals hold injured legs with slightly bent legs, severe lameness is observed when walking.

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