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ETIOLOGY, FREQUENCY AND CLINICAL SIGNS OF ASEPTIC JUMPING JOINT INFLAMMATION IN HORSES

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ABSTRACT

Articular pathologies in horses participating in sports and kupkari are recorded mainly at the end of the autumn season, in winter and spring, in the republic's farms out of 466 horse heads, 44 heads (9.4%) had various aseptic inflammations, for example, 8 animals have acute synovitis, 21 horses have chronic synovitis and 15 animals have periarticular fibrositis, traumatic injuries are considered the main cause of joint disease in horses participating in the Kupkari. Under the influence of the above etiological factors, degenerative changes in cells and tissues are observed, as a result of which the necessary processes in the body are disrupted and, as a result, the protective properties of the body are reduced. The animal felt pain during passive movement, and low to moderate chromate levels were observed during movement. When you press your finger on one of the tubercles of the joint, the movement of fluid towards the second tubercle is clearly felt. In animals with periarticular fibrosis, the fibrous capsule increases, the ligaments thicken, and their elasticity decreases. At the onset of the disease, pain was observed on palpation of the joint capsule and ligaments, at rest no pain was observed, but severe lameness was observed during movement, work.

KEYWORDS: *Acute Synovitis, Chronic Synovitis, Periarticular Fibrosis, Ecological Diverticula, Protein, Vitamins, Macro And Microelements.*

INTRODUCTION

Diseases of the joints in horses are caused by microtraumas during joint tension, slippage and deformation of the hooves, injuries of the musculoskeletal system of the legs. In addition, the origin of arthritis in some joints can be caused by factors such as their anatomical and topographic structure, varying degrees of open fractures, and other features. (1,2,3,4)

Analysis of the literature on the study of the morphofunctional structures of the fingers and their features during the course of the disease, which have clinical and diagnostic value in the diagnosis of arthritis in horses, showed that, despite sufficient information about the anatomical structure of the fingers, postpartum changes in these features, changes in their storage, feeding and use in animals, the features of the manifestation of hemohistocytic barriers of the joints of the fingers in various diseases, as well as its etiology, pathogenesis and the degree of occurrence have not been studied. In this regard, life itself requires extensive scientific research on non-traditional methods of treatment, foci of diseases, animal protection means and their role in diseases. (5,6,7,8)

Analysis of scientific sources shows that today the etiopathogenesis, diagnosis and prevention of arthritis in horse breeding farms of the country are not sufficiently substantiated, and there are no data in the literature on the use of local remedies for the treatment of inflammation of the joints of the fingers in animals.

More common joint diseases in horses arise from improper storage, feeding and use. In horses, arthritis is more chronic, and if timely treatment is not applied, they lose their ability to work for months and, as a result, cause great economic damage to farms.

Object and research methods. Our studies and experiments to study the regional features of the etiopathogenesis of abscesses in horses are carried out at the Samarkand Institute of Veterinary Medicine, the Department of Veterinary Prevention and Treatment, the Department of Veterinary Surgery and Obstetrics in 2019-2021 in Samarkand and Kashkadarya regions for sports and kupkari.

The results obtained and their analysis. During a clinical examination of 125 animals of the Karabayir equestrian complexes of the Yakkabag district of the Kashkadarya region, 12 animals (9.6%) were found to have joint pathology, including acute synovitis in 3 horses (25%), in 5 animals (41.6 %) chronic synovitis and 4 horses (33.4%) of chronic periarticular fibrosis. A clinical examination of 81 animals from the farms of the equestrian club "Chorvachi Beklar" of the Djambay district of the Samarkand region revealed joint pathology in 10 heads (12.3%), including acute synovitis of horses in 1 head (10%), in 6 heads (60%) had chronic synovitis and 3 horses (30%) had chronic periarticular fibrosis. (table 1)

When examining 134 horses of the horse breeding farm "Chorvador" of the Karshi district of the Kashkadarya region, 8 heads (5.9%) of animals were found to have various non-suppurative joint pathologies, including acute synovitis in 1 head (12.5%) of the animal, in 4 heads (50%) animals have chronic synovitis and 3 heads (37.5%) animals have chronic periarticular fibrosis.

Clinical examination of 126 animals from the herd of the limited liability organization "Tur Orient Triel" in the Samarkand region revealed joint pathology in 14 heads (11.1%), including acute synovitis in 3 horses (21.4%), 6 heads (42.8%) of animals had synovitis and 5 heads (35.8%) of horses had chronic periarticular fibrosis.

It was noted that when inspections were conducted year-round, they were mainly observed during the fall, winter and spring months. The main reason for this is that one of the national sports games of our Kupkari people is often held at this time of the year.

The incidence of purulent diseases of the joints of horses in livestock and farms.**TABLE 1**

s/n	Name of the farm	Number of animals examined	Sick animals		Acute synovitis		Chronic synovitis		Chronic periarticular fibrosis	
			Quantity	%	quantity	%	quantity	%	quantity	%
	Karabayir equestrian complex of the Yakkabag district of the Kashkadarya region	125	2	9,6	3	25	5	41,6	4	33,4
	Equestrian club "Chorvachi beklar" of Djambay district of Samarkand region.	81	10	12,3	1	10	6	60	3	30
	Horse breeding "Chorvador" of the Karshi region of the Kashkadarya region.	134	8	5,9	1	12,5	4	50	3	37,5
	Horsemen of the limited liability company "Tur Orient Triel" of the Samarkand region.	126	14	11,1	3	21,4	6	42,8	5	35,8
	Total:	466	44	9,4	8	18,2	21	47,8	15	34

Clinically examined 466 horses from farms of the republic, of which 44 heads (9.4%) of animals revealed the presence of various non-suppurative inflammation of the joints. Of these, 8 heads were diagnosed with acute synovitis and this accounted for 18.2% of common pathologies of the joints, 21 heads (47.8%) had chronic synovitis and 15 heads (34%) of animals with chronic periarticular fibrosis had early and clinical manifestations.

The etiological factors causing joint disease are varied, and they can be caused by the predisposition of animals to this disease or as a result of certain diseases.

Under the influence of the above etiological factors, degenerative changes in cells and tissues are observed, as a result of which the necessary processes in the body are disrupted and, as a result, the protective properties of the body are reduced. Therefore, the study of the regional characteristics of the causes of joint diseases in horses is of great scientific and practical importance.

Based on this, in our study, we analyzed the storage, feeding, care and use of horses, which are mainly used for sports and recreation.

Horses raised on horse farms are mostly driven and tied only during the winter months. The stables in which they are kept are uneven, of multi-layered soil, and the walking areas are narrow. The hooves of most horses are overgrown, the hooves are not cleaned or trimmed in time, only the hooves of horses that gallop on Kupkari are trimmed and shod.

When we analyze horses that play sports, they mostly feed on a leash. The microclimate of the premises where they are stored is satisfactory, the manure is removed, the distribution of feed and watering is done manually. The stables are baked brick, flat, and the corridors in the middle of the stables are concrete. There are active animal rugs and hooves are trimmed and shod on time.



Picture 1. Aseptic inflammation of the jumping joint in horses.

Research results have also shown that younger athletes who are less experienced in preparing horses for various competitions are more likely to cause injuries to the wrists, ankles and jump joints due to their inability to train horses well, twisting, straining and jumping over high obstacles, speed running and turning them on the run.

In equestrian horses participating in the Kupkari, joint diseases are mainly caused by improper clipping and shoeing of the hooves, incorrect turning when running fast, falling horses, kicking each other and biting horses, uneven hard and rocky ground, heavy loads, running uphill and downhill, sliding horses causes excessive stress on the joints and damage to the articular elements in it.

In horses, like in other animals, the composition of the diet and the amount of digestible protein, vitamins, macro and microelements are important. Their deficiency in the diet leads to various degenerative changes in the animal's body, including joints.

In addition, the addition of various plants to the diet of horses, such as barley, wheat and compound feed containing poisonous plants, can lead to various toxic-allergic conditions in the body and damage to joints.

Clinical signs of pathological processes in sick animals in the farms where the studies were carried out were clearly visible, and they are easy to diagnose using general and special methods of examining foot diseases.

When collecting anamnestic data from the examined sick animals and their clinical examination, it turned out that pathological processes are mainly localized in the jumping joints of the foot. It was found that 8 heads of animals with acute synovitis developed a pathological process in the jump joints of both legs. Of the 21 heads of an animal affected by chronic synovitis, pathological processes were found in the jump joints of both legs.

In addition, 15 animal heads clearly showed the presence of pathological processes in the jump joint of one leg, the initial stage of chronic periarticular fibrosis and clinical manifestations.

In sick animals, clinical signs manifested themselves as follows, depending on the localization of the pathological process and its course. In acute serous synovitis, the joints swell, the local temperature is elevated and painful, fluctuations are noticeable on palpation, the diverticula of the joints are tense. The animal felt pain during passive movement, and low to moderate chromate levels were observed during movement. When you press your finger on one of the tubercles of the joint, the movement of fluid towards the second tubercle is clearly felt. It is noted that the pathological process in the joint begins mainly in the upper part, where the fluctuating tumor is located on the dorsal surface of the joint between the stretching cartilage of the finger and the common stretching cartilage of the finger. This swelling has a slightly rounded shape that fluctuates well when the foot is free. In some animals, damage was found to the middle row of the heel joint with two crescent-shaped tumors around the joint. With pathological processes in the joint, the tumor formed quickly, the local temperature was highly passive, and pain was strongly manifested during the movement of the blood circulation. Gives vibrations in the convex areas of articular diverticula, in places a sound similar to the creak of snow is heard. Moderate lameness was noted when moving animals.

In the joint of animals with chronic synovitis, lameness was not observed, but the injured joint flexed poorly; moreover, under heavy load, the animal quickly tired and weak lameness appeared in the joint. On palpation of the joint, it was found that it is a large swelling that gives rise to fluctuations, and that 3 diverticula in the heel joint are filled with fluid. When pressing on the diverticula of the joint with a finger, the transition of liquid synovial folds from one to another was clearly manifested. At rest, the animal keeps the affected leg bent or transfers body weight from one leg to the other.

In animals with periarticular fibrosis, the fibrous capsule increases, the ligaments thicken, and their elasticity decreases. At the onset of the disease, pain was observed on palpation of the joint capsule and ligaments, at rest no pain was observed, but severe lameness was observed during movement, work. When the legs of the animal move in the tissues, a painful reaction occurs as a result of stretching the inflamed area and unbending the joint capsule. Palpation of the joint capsule and synovial folds was difficult; with passive joint movement, pain and limited range of motion were noted. Comparison of a diseased ankle with a healthy ankle showed that it was deformed.

CONCLUSION

1. Clinically examined 466 heads of horses from farms of the republic, of which 44 heads (9.4%) of animals revealed the presence of various non-suppurative inflammation of the joints. Of these, 8 heads of animals had acute synovitis and this accounted for 18.2% of common pathologies of the joints, 21 heads (47.8%) of animals had chronic synovitis and 15 heads (34%) of animals showed the onset and clinical manifestations of chronic periarticular fibrosis.

2. Clinical signs in sick animals, depending on the localization and course of the pathological process in acute serous synovitis, the joints were swollen, the local temperature was elevated and painful, fluctuations were noticeable on palpation, the diverticula of the joints were tense.

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