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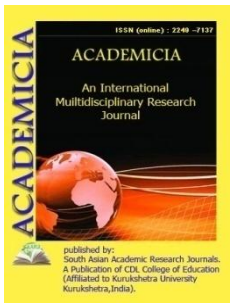

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ETIOLOGICAL FACTORS, FREQUENCY OF OCCURRENCE AND PATHOMORPHOLOGICAL INDICATIONS FOR PURULENT INFLAMMATION OF THE JOINT OF THE FINGERS IN SPORTS HORSES

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ABSTRACT

Joint pathologies in sports horses and horses participating in kupkari, mainly the presence of glass fragments, wires, metal and stone fragments with sharp edges on pastures and training grounds, holes dug by rodents in steppe lands, rocky and uneven places, it was noted that the inept handling of the rider with a horse caused by a fall of horses, 30 heads (14.7%) out of 203 horses in the farms of the Samarkand region were diagnosed with acute purulent synovitis of the joints, chronic purulent synovitis and purulent arthritis, more injuries of the joints of the toes were reported in horses participating in the Kupkari. As a result of injuries, purulent inflammatory processes of the joint are observed, characterized by severe pain, swelling, redness, increased local temperature and dysfunction, vascular hyperemia and an increase in their permeability.

KEYWORDS: *Sports Horses, Joint, Purulent Inflammation, Acute Purulent Synovitis, Chronic Purulent Synovitis And Purulent Arthritis, Dislocations, Trauma, Etiology, Pathogenic Microorganisms.*

INTRODUCTION

In our country, some of these diseases are widespread and severe for the reasons indicated above, which complicates the therapeutic balance and causes great economic damage.In some cases, joint diseases range from 9 to 11%. Premature deregistration of animals sometimes leads to their death.It is important to note that finger joint disease causes more joint disease due to mechanical trauma to the joints located on the fingers.Although the problems of veterinary arthrology have

been studied for a long time, many aspects are not yet fully understood, the treatment and prevention of the development of the origin of the disease must be scientifically substantiated.

On the farms of the republic, especially in horse breeding farms, purulent inflammation of the ankle joints is widespread among animals, causing great economic damage to farms. For example, the incidence of purulent arthritis in horses is 6%, with an increase in body weight per head by 25-35 kg and a decrease in their growth rate by 28-30%.(1,6,7,8,).

As a result of injuries, purulent inflammatory processes of the joint are observed, characterized by severe pain, swelling, redness, increased local temperature and dysfunction, vascular hyperemia and an increase in their permeability. Open wounds in the joints cause lysis of damaged soft tissue cells due to the fall, development and growth of pathogenic microorganisms, accumulation of purulent-serous exudate, excitation of nerve receptors in the surrounding vascular wall, which leads to cell swelling. (1,2,3,4,).

Open wounds of various shapes and depths as a result of exposure to strong mechanical factors in the joints and ingestion of streptococci, staphylococci, bacteria, bacilli, Escherichia coli and other aerobic and anaerobic pathogenic microorganisms cause purulent synovitis, capsular flagella, purulent arthritis. (5,6,7,8).

Place, object and research methods.A clinical examination of horses of various breeds of horse breeding farms, horse races, horse clubs and private horse owners of the region's districts was carried out.At the same time, the examination of horses participating in the "kupkari" games was carried out by general and special methods. Clinical examinations included body temperature, respiratory and heart rate, general condition, location of the lesion, and mechanism of transmission.

Analysis of the results obtained. Injuries of sports horses and trained horses, as well as the main factors causing acute purulent synovitis, chronic purulent synovitis and purulent arthritis, mainly in the joints of the fingers, are the presence of glass fragments, wire, metal fragments and stones with sharp edges, in the steppe, on stony and uneven areas, due to deep holes dug by rodents.

Games "Kupkari" are unique in each region, the weight of a goat is from 30-35 kg to 65-70 kg, in a herd formed to obtain a goat, horses step on each other's feet, bite, kick, move at right angles at a sharp speed to the right or to the left with a heavy load and as a result, the balance and coordination of movements are disturbed, falls, the joints are injured, and in the pathological plane the origin of streptococcus, staphylococcus, bacteria, bacilli, acute purulent synovitis, chronic suppurative synovitis and purulent arthritis from pathogenic microorganisms in aerobic and anaerobic forms is revealed.

The level and etiology of regional morbidity of acute purulent synovitis, chronic purulent synovitis and purulent arthritis caused by bruises and injuries received during equestrian games with horses participating in the Kupkari games of livestock and farms in the region have been determined and studied.

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	%
1	Samarkand district of Samarkand region	25	5	20	1	20	3	60	1	20
2	Jambay district of Samarkand region	18	4	22,2	1	25	2	50	1	25
3	Urgut district of Samarkand region	34	8	23,5	2	25	4	50	2	25
4	Horsemen of the limited liability company "Tur Orient Triel" of the Samarkand region.	126	13	10,3	3	23,1	8	61,5	2	15,4
5	Total:	203	30	14,7	7	23,4	17	56,6	6	20

Surgical examination of 203 horses from the districts of the Samarkand region revealed that 30 heads of 14.7% of sports horses were diagnosed with acute purulent synovitis, chronic purulent synovitis and purulent arthritis in the joints.

During the medical examination of 25 animals from the farms of the Samarkand district of the Samarkand region, joint pathology was detected in 5 animals (20%), including 1 head (20%) with acute purulent synovitis of horses, in 3 animals (60%) of animals with chronic purulent synovitis and 1 head (20%) of the horse has purulent arthritis.During a clinical examination of 18 animals from the farms of the Dzhambay district of the Samarkand region, 4 heads (22.2%) had pathology of the joints of the fingers, including 1 head (25%) of the horse with acute purulent synovitis, 2 heads (50%) of animals had chronic purulent synovitis and 1 head (25%) of the horse reported purulent arthritis.(table-1)

Clinical examination of 34 heads of animals from the farms of the Urgut district of the Samarkand region in 8 heads (23.5%) revealed pathology of the joints of the fingers, including 2 heads (25%) of horses with acute purulent synovitis, in 4 heads (50%) the animals had chronic suppurative synovitis and purulent arthritis was found in 2 horses (25%) of horses.

During a clinical examination of 126 animals from the herd of the limited liability organization "Tur Orient Triel" in the Samarkand region, 13 heads (10.3%) were found to have joint pathology, including 3 heads (23.1%) of horses with acute purulent synovitis, 8 heads (61.5%) of animals have chronic purulent synovitis and 2 heads (15.4%) of horses have purulent arthritis.

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.

Clinically examined 203 horses from farms of the Samarkand region, of which 30 heads (14.7%) of animals were diagnosed with acute purulent synovitis, chronic purulent synovitis and purulent arthritis of the joints of the fingers.Of these, 7 heads of 23.4% of animals had acute purulent synovitis and general pathologies of the joints, 17 heads (56.6%) of animals had chronic purulent synovitis, and 6 heads (20%) of animals clearly showed the onset and clinical manifestations of purulent arthritis.

In order to determine the pathological and anatomical changes in the elements of the joints as a result of various purulent processes in the joints of the legs of cattle, the purulent process in the joints of 5 heads of forced slaughter horses was investigated.

The following pathological and anatomical changes in the elements of the joints were revealed in case of purulent synovitis, purulent arthritis and phlegmonous inflammation of the joints.With purulent synovitis, the synovial layer in the joints is swollen, the synovial fluid is cloudy, the surface of the joint covering the epiphysis and diaphysis of the joint is uneven, and small blood clots are observed.As the suckers of the synovial layer underwent hyperplasia and hypertrophy, some areas of the synovial layer acquired a red granular velvety shape.Its dorsal and ventral sides were purple-gray with a slight growth of granulation tissue and in the form of long suckers with purulent exudate adhering to the space between the suction cups of the synovial layer and granulation tissue.The fibrous layer of the capsular ligament was swollen, and a purulent inflammatory tumor and infiltrate formed in the periarticular tissue. Although the surface of the articular ridges was thinly turbid, the surface was uneven, and no abnormalities in the stroma of the articular tissue were observed, they were found to have a pattern with white veins.

The volume of purulent exudate (150-200 ml) of a creamy consistency, white-yellow, gray-yellow, in some cases bluish-yellow. With purulent fibrinous synovitis, it was found that the presence of fibrin fragments in the pus has a reddish-yellow color when blood is mixed with it.

Examination of the joints of animals with a diagnosis of purulent arthritis in their articular cavity revealed pus mixed with yellowish-blue synovial fluid, as well as changes in the synovial and fibrous sacs, longitudinal and lumbar.The joint capsule, accessory segments and periarticular tissue thicken due to inflammation. The suction cups on the surface of the synovial sac were displaced, and an abscess formed on its surface, forming interstitial leaks.The fluid above the joint was cloudy, some parts of the joint were blurred, and small foci of necrosis of gray-blue or white-yellow color appeared. In some cases, the presence of yellow haemosid spots surrounded by a red projection was observed. In these animals, the articular crest is soft, the surface is uneven, with the formation of white stripes.

The phlegmonous process was observed in 4 heads of experimental animals, in which the infectious process was localized mainly in the articular capsule. The sub-synovial layer is swollen, there is a mixed purulent infiltrate. Inflammatory tumors also spread to the fibrous layer of the joint capsule and periarticular tissue.The inner surface of the joint is dry and uneven, and the thickness of the synovial membrane and the articular fold reaches an average of 1.8 cm.The surface of the joint crest is uneven, with white streaks, gloss is lost in places, foci of necrosis of 0.1-0.2 mm are formed.

Studies have shown that purulent synovitis is mainly caused by more mechanical trauma, as a result of trauma and as a complication of purulent processes in the surrounding tissues. In

addition, the development of purulent inflammation is influenced by the protective properties of the body in case of poisoning.

Deficiency of macro- and microelements in the body is one of the main factors in the development of purulent-necrotic processes in the distal part of the legs, as well as metabolic disorders, deterioration in the development of organs and tissues, and a decrease in immunobiological properties.

Based on the clinical signs of animals that underwent a purulent-inflammatory process in the joints of the legs, the results of the pathological examination and examination of the taken joint puncture, the development of purulent processes in the joint can be expressed as follows.

In the inflamed synovial membrane under the action of microorganisms, vascular hyperemia, edema, infiltration of lymphoid and plasma tissues and blood thickening are observed.

The suction cups of the synovial membrane are prone to hyperplasia and hypertrophy. As a result, some areas of the synovium acquire a red granular or velvety shape. The fibrous layer of the capsule and periarticular tissue swell.

Mixed pus accumulates in the degenerated tissue in the joint cavity. In some cases, fibrin clots and displaced suction cups of the synovial membrane are also observed in the pus. Gradually, changes appear in the crest of the joint, its shine begins to disappear, the surface becomes uneven, white stripes appear in places.

The products formed during the decomposition of exudate and tissues begin to be absorbed into the body and lead to the development of purulent-resorptive fever, an increase in body temperature by 1-20º C, an increase in pulse and respiration, and a decrease in appetite. Through the flow formed in the joint, pus begins to flow into the external environment, after which the flow channel closes.

Pus accumulates in the joint cavity, and over time, the capsule expands and contracts, the accumulation of pus in the articular bulges and the increase in joint volume limit the mobility of the joint and increase pain and numbness.

The formation of purulent arthritis is also similar to purulent synovitis in that the pathological process begins simultaneously in the joint capsule and the injured cartilage, starting with the ingress of microorganisms into the joint and damage to the joint through the cartilage, entering the capsule and synovial membrane.

Under the influence of purulent processes, the environment of the synovial fluid changes and disrupts the nutrition of the articular cartilage, which reduces its resistance to toxins and microorganisms.As a result, the articular cartilage becomes fibrous and melts under the influence of intermediate products. Microbes penetrate the fibrous and twisted layer of cartilage and destroy the cartilage tissue by releasing toxins.

Focal necrosis occurs as a result of the migration of connective tissue over the surface of the articular cartilage. As a result of the death of connective tissue, they begin to migrate, and from there, where the tissue migrates, microorganisms pass into the bone tissue and cause severe complications.

Phlegmonous processes in the joint capsule are mainly associated with complications of purulent synovitis and arthritis, and the purulent process surrounds the sub-synovial layer and the joint capsule. The process takes place at certain stages, in which large and small abscesses form in the joint capsule.

At the beginning of phlegmon, inflammation begins with a tumor, and then the cells pass into the stage of infiltration, in which the tumor becomes very painful, hot and dense in consistency. When the pathological process enters the next stage, the animal's condition worsens and the temperature rises, which indicates the destruction of tissues and the absorption of toxins released by microorganisms into the blood.After tissue necrosis in the pathological focus, the formed purulent process is ruptured and the accumulated pus is released into the external environment, thereby slightly improving the general condition of the animal. The growth of granulation tissue is observed only after cleansing the pathological focus from dead tissue.

If therapeutic measures are not applied in a timely manner, the pathological process develops again and turns into paraarticular phlegmon.

CONCLUSION

1.Injuries of sports horses and the main causes of purulent synovitis and purulent arthritis in the joints - the presence of glass fragments, wires, sharp metal and stone fragments on the wiring and training grounds, playing "kupkari" games in the steppe, rocky and uneven terrain, horses gathered around a goat, press each other's feet, legs cause injuries in the joints and cause purulent inflammation in the joints from streptococcus, staphylococcus, bacteria from pathogenic microorganisms in aerobic and anaerobic forms.

2.Clinically examined 203 horses from farms of the Samarkand region, of which 30 heads (14.7%) of animals were diagnosed with acute purulent synovitis, chronic purulent synovitis and purulent arthritis of the joints of the fingers.Of these, acute purulent synovitis in 7 heads of animals and this is 23.4% of general pathologies of the joints, in 17 heads (56.6%) of animals chronic purulent synovitis and in 6 heads (20%) of animals showed the onset and clinical manifestations of purulent arthritis.

3.With purulent synovitis, the synovial layer is swollen, the synovial fluid is cloudy, the surface of the ridge, the surface of the cartilage covering the epiphysis and the diaphysis of the joint was uneven and small blood clots were observed, and it was found that some areas of the synovial layer had a red granular velvety shape due to hyperplasia and hypertrophy of the suckers synovial layer.

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