



Treatment of Purulent Inflammation of Joints in Rabbits by Modern Methods

A. K. Roziboev

PhD candidate, Samarkand State University of Veterinary Medicine, Animal Husbandry and Biotechnology

Kokilov B. I.

Master student, Samarkand State University of Veterinary Medicine, Animal Husbandry and Biotechnology

Niyazov H. B.

Professor, Samarkand State University of Veterinary Medicine, Animal Husbandry and Biotechnology

Abstract: *Surgery was performed on rabbits with purulent joint diseases, the surgical site was cleaned with H₂O₂, 10% enrofloxacin was injected between the muscles, thrombocyte autoserum was injected around the joint, chondrolone was injected into the joint, and levamecol was injected into the wound. By the 11th or 12th day, swelling and a localized temperature in the legs had appeared in the rabbits. The body temperature was found to be normal.*

Keywords: *joints, suppurative synovitis, capsular phlegmon, suppurative arthritis, bacteria, microbial species, staphylococcus, streptococcus, Escherichia coli, fungi and K.*

Relevance of the research. The Cabinet of Ministers will breed descendants of pure lines of Karabayir, Akhaltaka, and other breeds of horses adapted to the local conditions of our region in accordance with the decision of the President of the Republic of Uzbekistan dated June 15, 2017 No. PQ-3057 "On Additional Measures for the Development of Horse Breeding and Horse Sports in the Republic of Uzbekistan". Several decisions have been made regarding the organization of the clinic, including training for sporting events, developing a nutritious feed base for them, observing hygiene of keeping and feeding, creating horse sports clubs and organizing hippotherapy centers based on it, organizing a tourist route, and veterinary medicine in order to quickly diagnose horse diseases and treat them with effective methods. [1].

The successful implementation of these choices is significantly hampered by non-infectious diseases of horses, such as purulent and non-purulent arthritic diseases of the joints.

Joint pathologies are more prevalent in horses that participate in sports and sports, primarily at the end of autumn, winter, and spring, and 51 out of 295 horses (17.3%) of 295 horses (17.3%) had various joint inflammations without pus, with 11 of them having acute synovitis, 18 having chronic synovitis in the head horse, and 22 having periarticular fibrositis processes. The main reasons for this are more damage to the leg joints in horses that participate in numerous races. [2,3,4].

Horses with chronic periarticular fibrositis in the joints, which is brought on by various types of injury and re-injury, exhibit one-sided damage to the heel, wrist, and hip joints as well as disfigurement of the joint, enlargement of the fibrous capsule, thickening of the joint ligaments, reduced elasticity, and severe pain when moving. Purulent inflammatory processes of the joint are



seen after accidents, and they are distinguished by excruciating pain, swelling, redness, an increase in local temperature, dysfunction, hyperemia of vessels, and increased permeability. Pathogenic microorganisms enter open wounds in joints where they grow and reproduce, lyse the soft tissue cells that have been injured, accumulate purulent-serous exudate, activate nerve receptors on the blood vessel walls nearby, and cause swellings as a consequence of cell swelling [5,6,7,8].

Joint drains, the use of antimicrobial drugs, and the removal of fibrin and interstitial tissue from the joint should be the mainstays of treatment for joint disorders. [9,10]

Purpose of the research. The types, percentages, and susceptibilities of microbes to antibiotics and other medications, as well as efficient methods of treatment with various pharmacotherapeutic drugs in samples taken from the joints of horses in our nation's breeding farms and in the care of the population, are to be developed taking into account the aforementioned.

Research object and methods. It took place in the "Epizootology, Microbiology and Virology" Department's facility and the "Veterinary Surgery and Obstetrics" Department's vivarium at the Samarkand State Veterinary Medicine, Animal Husbandry and Biotechnology University.

With the help of specialized sterile swabs, samples from the joints of horses with purulent synovitis, capsular phlegmon, and purulent arthritis were placed in sterilized Petri dishes containing Streptococcus nutrient medium Velli agar, Staphylococcus nutrient medium Shayli agar, and Pseudomonas aeruginosa nutrient medium Difko agar. After 24 hours at 37 C, cultured media were placed in a thermostat (Heratherm 1MI 41839123) and inspected. The pathogenic staphylococcus was yellow, resembling lemon peel, and the staphylococcus colony was cream in color. The streptococcal colony was red, suggesting acid formation by mannitol degradation. It appeared

When the colonies of microbes cultivated in Petri dishes were inspected from samples obtained from the joints of five head of horses with purulent synovitis, capsular phlegmon, and purulent arthritis diseases, staphylococcus 31-39%, streptococcus 21-27%, Escherichia coli 17-29%, and blue pus were found. Bacilli were discovered to make up 11–15%, and fungi 7–13%.

One colony from each Petri dish was taken, diluted 1:10 in 0.9% physiological solution, and placed on antibiotic-soaked discs, which were then placed in a thermostat (Heratherm 1MI 41839123) and incubated at 37 C for 24 hours in order to test the sensitivity of the microbes to antibiotics and other drugs. Zones were observed to develop around the disks when Petri dishes were removed from the thermostat. When the formed zones were measured with a ruler, staphylococcus 28 mm, streptococcus 24 mm, Escherichia coli 26 mm, Escherichia coli 23 mm, and fungi 25 mm were found on disks dampened with enrofloxacin 10%, while staphylococcus 24 mm was found on disks moistened with penstrep-400. Similarly, on ceftriaxone soaked discs, staphylococcus 26 mm, streptococcus 22 mm, Escherichia coli 23 mm, blue pus bacillus 23 mm, fungus 23 mm, on kanamycin soaked discs staphylococcus 22 mm, streptococcus 28 mm, Escherichia coli 15 mm, the blue pus bacillus was 13 mm, the bacillus was 12 mm. 5. Relatively smaller zones, containing staphylococcus 9 mm, streptococcus 6 mm, Escherichia coli 7 mm, blue pus bacillus 5 mm, and fungus 6 mm, were seen in ditrim-soaked discs.



0.1 ml of pathogenic staphylococci were injected into the wrist joint of 15 experimental rabbits using a 2 ml syringe and pathogenic staphylococci that were planted in Petri dishes as a nutrient medium and diluted 1:10 in 0.9% physiological solution. Groups 1-2 of the trial were designated as controls, and the wrist joint of rabbits Lameness, redness, edema, and a rise in local temperature began around hour six. Purulent arthritis started to form at the twelve-hour mark, and treatment was started.

Table 1

No	Groups	Number of rabbits	Treatment
1	Group 1 Experiment	5	1). Surgical treatment 2).H ₂ O ₂ - the inside of the surgery was cleaned 3).Enrofloxacin 10%-0.3ml was injected intramuscularly. 4). Platelet autoserum 1 ml 1 time in 3 days around the joint 5). Levamecol ointment intraoperatively
2	Group 2 Experiment	5	1). Surgical treatment 2). H ₂ O ₂ - is cleaned inside the surgery 3).Enrofloxacin 10% - 0.3 ml was injected intramuscularly. 4). Platelet autoserum 1 ml 1 time in 3 days around the joint 5). Chondrolon 0.5ml into the joint after the pus discharge stops 6).Levamekol ointment into the surgery
3	3rd group Control	5	1). Surgical treatment 2). H ₂ O ₂ - the inside of the wound is cleaned 3). Gentamicin - 0.3 ml was injected intramuscularly. 4).Levamekol ointment into the surgery

A surgical procedure was used to treat the joints of the rabbits in the first experimental group. The incision was cleaned with H₂O₂, enrofloxacin 10% - 0.3ml was injected into the muscle, platelet autoserum 1ml was injected around the joint once every three days, and levamecol ointment was injected into the surgery. By the third day, the rabbits had pus coming out of their joints, a partial lack of appetite, an elevated body temperature, lameness in their legs, reduced mobility, edema, and a localized temperature. With this course of therapy, we saw that the rabbits' mobility was active on days 14–15, there was no swelling, no localized temperature, a scar, and their body temperatures were normal.



The second experimental group of rabbits had their joints surgically treated before receiving treatment. The surgical area was cleaned with H₂O₂, enrofloxacin 10% - 0.3 ml between the muscles, thrombocyte auto serum 1 ml once every three days around the joint, levamecol ointment was injected into the surgical area, and 0.5 ml of chondrolon was sent inside after the fourth day after the discharge of pus stopped.

The rabbits displayed severe joint pain, a partial lack of appetite, elevated body temperatures, lameness in the legs, decreased mobility, swelling, and localized temperature. On the 11th and 12th days of this method of treatment, it was observed that the rabbits' mobility was absent, that there was no lameness, swelling, or local temperature in the legs, that only minor scars had formed in comparison to the 1st and 3rd groups, and that the rabbits' body temperatures were normal (Table 1).

In order to treat the rabbits in the third control group's joints, gentamicin-0.3ml was administered intramuscularly, the surgical interior was cleaned with H₂O₂, and levamecol ointment was injected into the surgery region. Pus discharge from the rabbits' joints, excruciating pain, a partial lack of appetite, an increase in body temperature, lameness in some of the legs, decreased mobility, swelling, and local temperature were all noted up until the fourth day. With this course of therapy, it was seen that on the 15th or 16th day, the rabbits' mobility was active, their legs were lame, there were scars, there was no localized temperature, and their body temperatures were normal.

Conclusion

1. When the samples taken from the joints of horses with purulent synovitis, capsular phlegmon and purulent arthritis in horse farms were examined for microbial colonies, staphylococcus 31-39%, streptococcus 27-21%, Escherichia coli 17-29%, blue pus bacillus 11-15% , it was noted that fungi make up 7-13% and the sensitivity of microbes to antibiotics and other drugs is the highest in enrofloxacin and penstrep - 400 moistened disks, and the lowest in ditrim moistened disks.
2. Surgery was used to treat rabbits with purulent joint diseases. H₂O₂ was used to clean the operation, 10% enrofloxacin was injected between the muscles, thrombocyte autoserum was injected around the joint, and levamecol was injected into the wound. It was noted that the body temperature was normal, the local temperature had dropped, and the swelling in the legs had disappeared.

References

1. Niyazov, H. B., & Abdiev, S. B. (2022). TYPES AND PERCENTAGES OF MICROBES IN SAMPLES FROM THE VAGINA AND CERVIX OF COWS WITH ENDOMETRITIS. *Solution of social problems in management and economy*, 1(2), 11-14.
2. Nuriddinov, B. Y., & Niyazov, H. B. (2022). INFLUENCE OF ETIOLOGICAL FACTORS AND SEASONS ON THE OCCURRENCE OF PURULOUS-NECROTIC PROCESSES IN THE TOES OF BREEDED COWS. *Conferencea*, 116-122.
3. Bakoevich, N. K., Buranovich, A. S., & Tolaboyoglu, T. N. (2022). Changes in Blood Leukoformula in the Treatment of Acute Postpartum Purulent-Catarrhal Endometritis in Cows by Various Methods. *Middle European Scientific Bulletin*, 23, 204-208.
4. Абдиев, С. Б., & Бақоевич, Н. Х. (2022). СИГИРЛАРДА ТУҒИШДАН КЕЙИНГИ ЭНДОМЕТРИТЛАРДАГИ МИКРОБЛАРНИНГ АНТИБИОТИКЛАРГА СЕЗУВЧАНЛИГИ. *Вестник Ветеринарии и Животноводства*, 2(1).



5. Kh, D. M. (2021). ETIOLOGY, FREQUENCY AND CLINICAL MANIFESTATIONS OF PURULENT INFLAMMATION OF THE FINGER JOINT IN SPORT HORSES. *AcademiciaGlobe: InderscienceResearch*, 2(6), 367-372
6. Ниёзов Ҳ.Б., Жураев Д., Файзиёв У. Отларнинг бўғим касалликларини даволаш. // Ўзбекистон қишлоқ хўжалиги. – Тошкент. 2012. - №9.- Б. 35-38.
7. Ниёзов Ҳ.Б., Жураев Д. Некоторые особенности этиопатогенеза гнойных артритов у спортивных лошадей. // Зооветеринария. – Тошкент, 2013. - №1. -Б. 18-20.
8. Niyozov H., Dilmurodov N., Davlatov N. Treatment of aseptic diseases of limb distal part joints in Uzbek sport horses. “Journal of Microbiology, Biotechnology and Food Sciences”, №12. 2016. P.478-481. Nitra. (Jurnal impact 0.29 INDEX COPPER Nicus).
9. Beccati F., Gialletti R., Passamonti F., Nannarone S., Di Meo A. & Pepe M. 2015. Ultrasonographic findings in 38 horses with septic arthritis/ tenosynovitis. *Vet. Radiol. Ultrasound* 56:68-76.