CLINICAL AND HEMOTOLOGICAL INDICATORS ON THE TENTH DAY OF THE TREATMENT OF SHEEP WITH COENUROSE AFTER SURGERY

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Abstract: *This article discusses the clinical and hematological parameters of sheep with coenurosis on the tenth postoperative day. An experiment was conducted on 17 sheep infected with senorosis. After the operation, blood samples were taken from each sheep during the 10-day treatment, blood analyzes were performed, and the obtained results were statistically processed.*

Key words: *coenurosis, morphology, hemoglobin, erythrocyte, leukocyte, erythrocyte sedimentation rate (ESR), ALT, AST, bilirubin, cholesterol.*

Introduction. Coenurosis is found in many countries of the world, causing great economic damage to sheep farms. Coenurosis is a fatal disease caused by the larval stage of Taenia multiceps, which causes large economic losses in sheep farms (Ravshanov 2021 , Tena 2020).

Relevance of the topic. Researchers have studied various indicators of blood in sheep with coenurosis and the following conclusions have been drawn.

Blood eosinophilia is often observed in allergic diseases, worm diseases (fasciolosis, echinococcosis, finnosis, coccidiosis, etc.) (Safarov 2019). In sheep, the interpretation of the hematological profile together with the history, clinical findings and other diagnostic tests provides valuable information for the final diagnosis of the disease. Examination of stained blood films is an important part of sheep hematological examination, providing information on cell morphology, presence of hemoparasites, and accuracy of automated cell counts. Blood biochemical analysis of goats with rare muscular coenurosis did not differ from biochemical indicators of healthy goats (Christodoulopoulos 2015). Haematobiochemical results revealed leukocytosis with mild eosinophilia, which may indicate parasitic infection, but no significant change in the red blood cell count of the affected sheep. From this except , protein profile and of fibrinogen serum concentration is in the normal range the fact that determined (Mohammadi 2021). When the blood of sheep suffering from coenurosis was examined and there were no changes in the complete morphological and biochemical indicators of the blood (Evangelisti 2016). Some parasitic to diseases diagnosis in putting for example , trichostrongylid infections during blood eosinophils share increase or enzymes for example , trematode in infections in the blood aspartate aminotransferase or -glutamyltransferase concentration

amount of increase observed . This in approaches restrictions available , of them the most important this is it methods of parasites to existence only indirectly diagnosis to put can (Arsenopoulos 2017). In coenurosis of blood pointers to the norm relatively segment nuclear neutrophils increased by 35.8% , cholesterol by 3.0% , erythrocytes drowning speed to 2.7 mm/s slowed down , hemoglobin by 1.4% , erythrocytes by 33.1%, eosinophils by 30.0%, AST by 64.1 % decrease determined (Narziyev 2022).

The results of the blood analysis of sheep suffering from coenurosis on the 5th day after the operation are as follows: hemoglobin decreased by 1.5%, erythrocytes decreased by 11.7%, eosinophils increased by 90.0%, neutrophils with segmented nuclei, thrombocytes, monocytes , and lymphocytes decreased. it was found to be in the yard. it was found that the erythrocyte sedimentation rate slowed down to 2.8 mm/s. In biochemical indicators, it was found that cholesterol decreased by 10.5% , ALT by 24.7% , AST by 20.5%, and total bilirubin increased by 20.5% (Narziyev 2023).

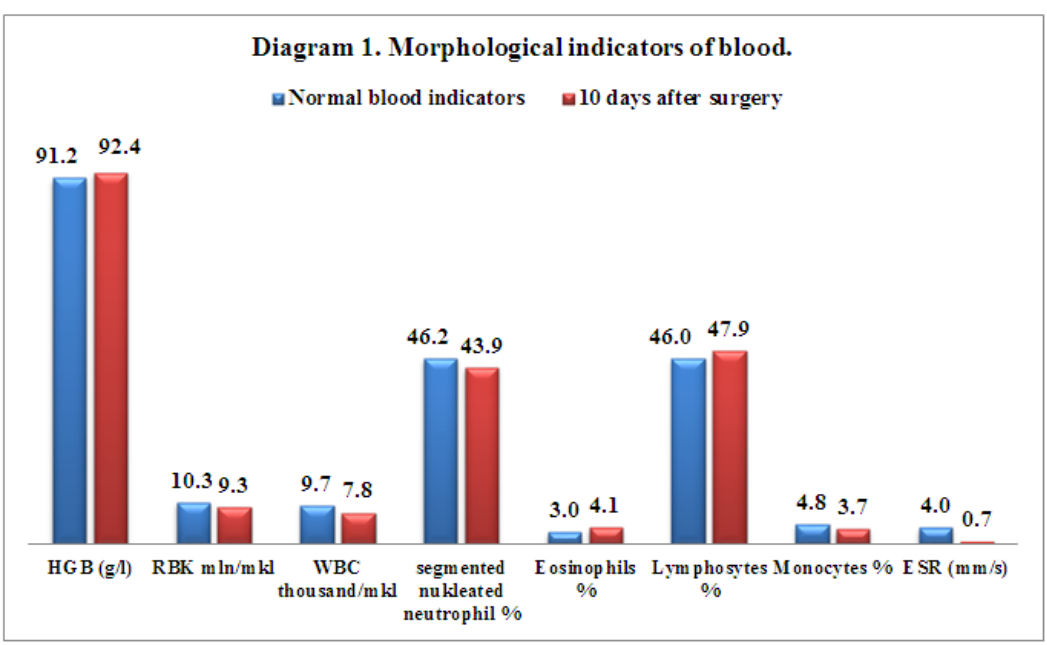
It is possible to evaluate the processes taking place in the body by determining the morphobiochemical indicators of the blood of sheep suffering from coenurosis.

Materials and methods. During 2021-2022, the research was conducted in the surgical clinic of the "Veterinary Surgery and Obstetrics" department of the Samarkand State University of Veterinary Medicine, Livestock and Biotechnology. conducted in 17 infected sheep. Sheep suffering from coenurosis were operated on at different times, and blood samples were taken and analyzed on the 5th, 10th, and 15th days from that day. In this article, only the results of the blood analysis 10 days after the operation are given. Received the results to compare for 17 head healthy from sheep blood received and experienced sheep that's it results with comparing went In research clinical , blood morphological and biochemical verification , biometric and statistics processing to give methods are used . In this case, the number of erythrocytes and leukocytes in the blood was counted on the Goryaev counting grid, and the biochemical indicators of the blood were checked by kinetic methods on the CYANSmart CY009 spectrophotometer.

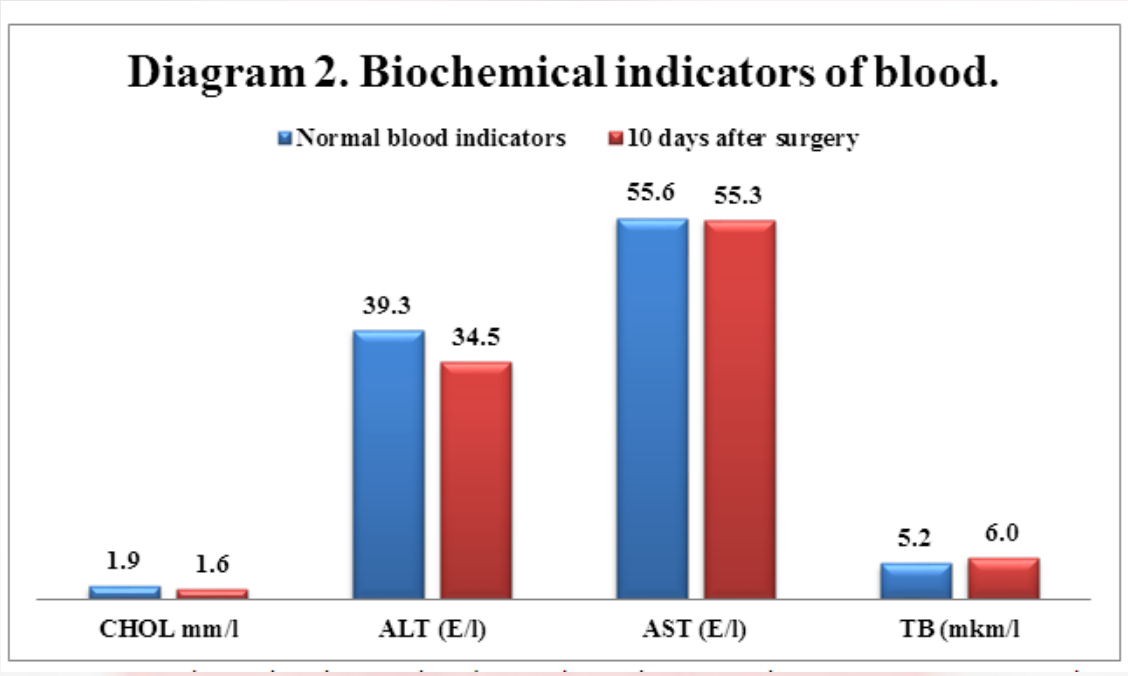
Research results and analyses. Physiological indicators were determined before taking blood samples from sheep surgically removed from the scrotum. It was observed that the average heart rate was 85 times per minute, the average number of respirations was 25 times, and the body temperature was 38.5-39.5 C°.

Figure 1. The process of testing blood samples of sheep with senurosis in the laboratory

Blood samples were taken in the morning before feeding the animals, 5 ml of blood with 1 ml/0.1 mg of heparin was taken and examined at the Samarkand Diagnostic Clinical Laboratory on the same day. On the 10th day after the operation, the total blood parameters of the experimental sheep with coenurosis increased by 1.3% compared to the norm of hemoglobin 92.4±1.5 g/l, erythrocytes 9.3±0.3 mln/ µl decreased by 9.7% compared to the norm, the amount of leukocytes decreased by 19.6% compared to the norm of 7.8±0.3 thousand/µl , platelets were within the norm, monocytes were 3.7±0.3% compared to the norm decreased by 22.9%, neutrophils with a segmented nucleus decreased by 5.0% compared to normal 43.9±0.4, lymphocytes increased by 4.7% compared to normal 47.9±0.7; eosinophils increased by 36.7% compared to the norm of 4.1±0.4%; ECHT was found to be 0.7±0.0 mm/s (diagram 1).



The analysis of biochemical blood parameters showed that Cholesterol (CHOL) was 1.6±0.1 mmol/l by 15.8% compared to the norm, ALT (alanine aminotransferase) was 34.5±0.8 B/l compared to the norm. by 12.2%, AST (aspartate aminotransferase) decreased by 0.5% compared to the norm of 55.3±0.8 B/l, Total bilirubin (TB) decreased by 6.0±0.2 µm/l compared to the norm It was found to increase by 15.4%, $p \leq 0.001$ (diagram 2).



We remind you that the results obtained in relation to the norm can correspond to the limits of the change of blood parameters of healthy sheep. For example, in healthy sheep (belonging to different breeds), the limit of hemoglobin change is 90-160 g/l (Constable 2016) . That's why we isolated healthy sheep from diseased areas, the laboratory results of these sheep's blood were taken as standard and the results of the study were compared with these indicators.

It can be seen that the decrease in the amount of ALT and AST enzymes can be caused by the use of these antibiotics.

Conclusion. The results of the blood analysis of the sheep with coenurosis, obtained on the 10th day after the operation, showed that hemoglobin increased by 1.3%, lymphocytes increased by 4.7%, and eosinophils increased by 22.9%, erythrocytes increased by 9.7%, and the number of leukocytes increased by 19.6%. It was found that neutrophils with segmented nuclei were 5.0%, monocytes were 22.9% , and lymphocytes were normal. Platelet count and erythrocytes drowning speed found to be within the norm. It was found that cholesterol decreased by 15.8% , ALT by 12.2% , AST by 0.5%, and total bilirubin increased by 15.4%.

REFERENCES:

1. **Akmal o‘g‘li R.M., Daliyevich N.B., & Parvoz o‘g‘li T.D.** (2022). Qorako‘l qo‘ylarni miyasining morfo-metrik ko‘rsatkichlari. *Barqarorlik va yetakchi tadqiqotlar onlayn ilmiy jurnali*, *2*(2), 277-281.
2. **Arsenopoulos K., Fthenakis G. C., Papadopoulos E. Sonoparasitology**: An alternative approach to parasite detection in sheep //Small Ruminant Research. – 2017. – T. 152. – C. 162-165.
3. **Christodoulopoulos G., Kassab A., Theodoropoulos G.** Characteristics of non-cerebral coenurosis in tropical goats //Veterinary parasitology. – 2015. – T. 211. – №. 3-4. – C. 216- 222.
4. **Constable PD, Hinchclif KW, Done SH, Grünberg W** (2016) Veterinary medicine: a textbook of the diseases of cattle, horses, sheep, pigs and goats. Elsevier Health Sci UK. –p. 2047.
5. **Evangelisti M. A. et al.** Clinical evolution of cerebral coenurosis from invasive to chronic infection in sheep and a goat //The Journal of Infection in Developing Countries. – 2016. – T. 10. – №. 10. – C. 1151-1155.
6. **Mohammadi P. et al.** Clinical report of Coenurosis cerebralis outbreak in Lori sheep //Comparative Clinical Pathology. – 2021. – T. 30. – №. 5. – C. 729-733. Mărcuțan I. D. et al. Coenurosis in sheep: basic and therapeutic aspects //Scientia Parasitologica. – 2016. – T. 17. – №. 3/4. – C. 113-117.

7. **Narziyev B. D. Et al.** Clinical and Hemotological Indications on the Fifth Day of the Treatment of Sheep with Senurose after Surgery //international journal of biological engineering and agriculture. – 2023. – Т. 2. – №. 4. – С. 45-48.
8. **Narziyev B. D., Ravshanov M. A., Saidov S.** Senuroz bilan kasallangan qo‘ylarni operatsiyagacha klinik-gemotologik ko‘rsatgichlarining o‘zgarish dinamikasi //agrobiotexnologiya va veterinariya tibbiyoti ilmiy jurnali. – 2022. – С. 421-424.
9. **Narziyev B. D., Ravshanov M. A., Saidov S.** Senuroz bilan kasallangan qo‘ylarni operatsiyagacha klinik-gemotologik ko‘rsatgichlarining o‘zgarish dinamikasi //Agrobiotexnologiya va veterinariya tibbiyoti ilmiy jurnali. – 2022. – С. 421-424.
10. **Ravshanov M. A.** Qizilqum yaylovlari sharoitida qorako‘l qo‘ylarida senuroz kasalligining tarqalishi va uning salbiy oqibatlari //Марказий осие яиловлари: глобал муаммолар ва глобал имкониятлар. Samarqand – 2022. № 1. –b. 126-127.
11. **Ravshanov M. A.** Qo‘ylar bosh miyasining anatomo-topografik tuzulishi //Veterinariya meditsinasi. Toshkent– 2022. –T. 2. –b. 31-32.
12. **Ravshanov M. A.** Senurozga chalingan qo‘ylarda ultratovush tekshirish natijalari //Veterinariya meditsinasi.Toshkent – 2022. № 10. –b. 16-17.
13. **Ravshanov M.** Senurozga chalingan qo‘ylarni bosh suyaklarining morfometrik o‘zgarishlari //Qishloq xo‘jaligida innovatsion texnologiyalarni ishlab chiqarish va joriy etishning istiqboldagi vazifalari. Samarqand– 2022. №. 1. –b. 12-15.
14. **Ravshanov M.** Коракул куйларида ценурозни хирургик усул билан даволашни такомиллаштириш //тенденции развития ветеринарной паразитологии на пространстве снг и других стран в начале xxi века. Самарканд – 2021. –с. 138-142.
15. **Tena L. et al.** Chronic coenurosis in sheep: spontaneous remission of clinical signs and role of CT and MRI in the diagnosis and follow-up //Veterinary Record Case Reports. – 2020. – Т. 8. – №. 2. – С. 1-5.