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INDICATORS OF THE BLOOD COMPOSITION OF MEDICATED HORSES

ANNOTATION

This study investigates hematological, biochemical indicators, and mineral content in the blood of horses affected by paraskaridosis, emphasizing the biochemical processes following therapeutic measures. Blood plays a critical role in maintaining the animal's health and reflecting the state of hematopoietic organs. The research involved three groups of Jabe breed horses infected with paraskarids, with one group serving as a control. Blood samples were collected before and 45 days after deworming. Results indicated significant changes in blood parameters due to parasitic infestation, particularly in hemoglobin, red blood cells, white blood cells, and mineral levels. Hemoglobin levels dropped by 23.5-36%, while erythrocyte counts were also reduced in infested horses. After treatment, hemoglobin and erythrocyte levels were restored. Biochemical analysis revealed lower total protein and glucose levels in infected horses, along with significant reductions in urea, bilirubin, phosphorus, magnesium, iron, sodium, potassium, and chloride. Overall, these findings highlight the impact of paraskaridosis on horse health and the importance of monitoring blood parameters for assessing recovery and overall well-being.

Key words*: Paraskaridosis, hematological indicators, biochemical indicators, horse health, blood composition, deworming, mineral content, therapeutic measures.*

Introduction. The study of hematological, biochemical indicators and mineral content in the blood of horses after applying therapeutic measures against paraskaridosis infestation reveals the essence of biochemical processes occurring in the horse's body [1]. Blood, as a type of tissues of the internal environment, is of great importance for the life of the animal's body. Blood, together with the organs of hematopoiesis and structural processing, forms a complex morphological and functional system. Therefore, the composition of peripheral blood primarily reflects the state of the hematopoietic organs, of which it is derived. At the same time, this system is closely connected with the whole organism and is under the influence of a complex regulator of humoral-endocrine and nervous mechanisms. [2].
Morphological and biochemical blood indicators are of great importance in assessing the body's immunity, together with the determination of indicators of natural endurance. Only with the constant intake of substances that lead to organs and tissues with the blood can the level of natural resistance of the body be maintained at the proper level. Due to its close contact with tissues, blood has all the reactive properties of these tissues. When their function is impaired, the development of local and general pathological processes changes not only the biochemical, but also the morphological composition of the blood. The composition of the blood not only reflects the state of the animal, but also gives a general idea of adaptation to environmental conditions. Blood indicators make it possible to observe various pathologies in the animal's body caused by feeding, maintenance, various diseases and other factors.

Therefore, the study of blood parameters helps to correlate these changes with performance and correctly understand [3].

Materials and methods of research. The purpose of our research work in this section was to study the hematological and biochemical indicators of the blood of horses suffering from paraskaridosis and after deworming and the mineral composition of the blood. For experiments, groups of horses of the Jabe breed, infected with paraskarids at the age of 3 years in natural conditions, were selected. The experimental animals were divided into 3 groups of 5 heads each according to the analog principle. Horses of the first group served as control (healthy), the second Group – background (damaged by paraskaridosis infestation), the third group –P. equorum was infected and treated with Brovermectin gel paste. The duration of the experiment depended on the time of the recovery period and was 45 days. Blood samples for hematological and biochemical studies were taken from a jugular vein before the start of the experiment, and then 45 days after the administration of drugs. [4,5].

Results and their discussion. If we analyze table 1, in all farms located in the radiation hazard zone, the hemoglobin content in horses pure from paraskardias ranged from 9.55±1.8 to 12.11±1.1 g/l and did not deviate from the normal level. We see a sharp decrease in the amount of hemoglobin in the blood of horses affected by infestation in the same regions. In general, in all farms located in the radiation hazard zone, the amount of hemoglobin decreased by 23.5-36% due to the harmful effects of paraskardias. And horses of the Quail Village Farm located in the extreme radiation hazard zone decreased by 32.4%, horses of the Beskaragay Village Farm located in the maximum radiation hazard zone by 36.0%, horses of the Sagyr Village Farm located in the upper radiation hazard zone by 23.5% and horses of the village of Zhantikei located in the lower radiation hazard zone by 25.7%. As a result of a blood examination after 45 days of treatment of horses for paraskaridosis, the content of hemoglabin in all farm horses located in the radiation hazard zone was restored by 92.3–100%.[6].

The number of red blood cells in horses free from invasion was 6.58±0.15–8.41±0.15 1012/L, that is, did not deviate from the normal amount. In horses affected by infestation, depending on the radiation hazard zone (TrkA,Maxrka,Arka, Minrka), there was a decrease of 34.2; 31.5; 25.0 and 13.2 (%), respectively. As a result of a blood examination after 45 days of deworming horses for paraskaridosis, the erythrocyte content was restored by 100% in all farm horses located in the radiation hazard zone. [7].

In horses free of paraskaridosis infestation, the white blood cell content was 8.79±0.21-8.28±0.37 109 / L, and in horses infected with paraskarids, the white blood cells were 9.64±0.41-13.41±0.21109 / L, slightly higher than in the white blood cells of animals free of infestation(9,6%;24,5%;56,6%;71,0%) observed. When determining leukocytes in the blood 45 days after deworming horses for paraskaridosis, the leukocyte content in farm horses located in the radiation hazard zone ranged from 7.45±0.64 to 8.81±0.14 109/L. [8].

In horse breeding located in the Quail rural district, located in the zone of extreme radiation danger, lymphocytes in the blood of horses clean from paraskaridosis were 4.2% lower than normal, while in the blood of horses located in other radiation-hazardous zones, lymphocytes did not deviate from the normal state. And we noticed that in the blood of horses affected by paraskaridosis infestation, lymphocytes sharply increase. In comparison with pure horse blood from paraskaridosis in radiation-hazardous areas, lymphocytes increased by 32.6%, 30.7%, 18.4% and 17.5% in TrkA,Maxrka, Arka, Minrka, respectively. When determining lymphocytes in the blood 45 days after deworming horses for paraskaridosis, lymphocytes were 1.6% lower than normal in farm horses located in the zone of extreme and minimal radiation risk. And in the zone of maximum and high radiation risk, lymphocytes did not deviate from the normal size. [9].

In all farms located in the radiation hazard zone, the content of monocytes in horses pure from paraskaris did not deviate from the normal level, being in the range of 2.34±0.27–2.65±0.41%. In farms located in the radiation hazard zone, the content of monocytes in horses affected by paraskaridosis increases by 28.5, 45.7, 65.7 and 62.4% compared to horses pure from paraskarids. In the determination of monocytes

in the blood 45 days after the treatment of horses for paraskaridosis, there was a decrease of 34.6, 48.9, 73.6 and 65.1% compared to horses affected by paraskaridosis and a lower level of normal size. [10].

The size of Rod–nucleated neutrophils ranged from 3.81±0.44-4.42±0.33 in horses pure from parascardias, with no deviation from normal size.It was found that the amount of Rod-core neutorphils decreased somewhat in horses affected by the infestation. In general, compared to farms that are free from invasion located in the entire radiation hazard zone, the amount of neutrophils from the harmful effects of paraskardias decreased by 41.5% in horses of the Quail Village Farm located in the extreme radiation hazard zone, by 39.0% in horses of the Beskaragai Village Farm located in the radiation hazard zone, by 31.6% in horses of the Sagyr Village Farm located in the upper radiation hazard zone and by 21.4% in horses of the Zhantikey village located in the lower radiation hazard zone. As a result of a blood examination after 45 days of treatment of horses for paraskaridosis, the content of neutrophils in all farm horses located in the radiation hazard zone was at the level of 3.55±0.23–4.22±0.34. [11].

Segment nuclear neutrophil score was observed in horses pure of parascardias in the range of 46.00±1.54–54.04±1.41. These indicators correspond to the position in the posture. In horses of quail farms located in the zone of extreme radiation danger (46.00±1.54), the content of segmental neutrophils (54.04±1.41) in the blood of horses located in the zone of low radiation danger is slightly higher. In comparison with infestation-free farms located in the radiation-hazardous zone, the content of neutrophils in the blood of horses of Quail Village Farms located in the extreme radiation-hazardous zone decreased by 41.4%, horses of Beskaragai Village Farms located in the maximum radiation-hazardous zone by 45.2%, horses of Sagyr Village Farms located in the upper radiation-hazardous zone by 45.4% and horses of Zhantikei Village Farms located in the lower radiation-hazardous zone by 42.7%. As a result of a blood examination after 45 days of deworming horses for paraskaridosis, the neutrophil content in all farm horses located in the radiation hazard zone was at the level of 44.12±1.41–51.88±1.19% and began to return to normal. [12].

Doing so will cause the monocytes and neutrophilizers to break down and the physiological norms to change. If you do not take the device into contact with the morphological parameters of the body, the hemoglobin will be increased and the parascarid infestation will be reduced, erythrocytter, neutrophilisers, lymphocytes, eosinophilisers, lymphocytes, eosinophilisers and eosinophilisers. Doing so may cause the paracaridaler to become damaged or the organism to become weak, where the agent will cause the immune system to deteriorate.

Table1 – Morphological indicators of equine blood in Paraskaridosis infestation and after treatment of horses

Blood indication	Horses of experience	Bodenevillage (TRKA)	Beskaragayv illage (MRKA)	Sagyr village	Zantikei village
Hemoglobin, 10 g/l the norm is 8–15	free from infestation	9,55±1,8	10,17±1,2	10,34±0,4	12,11±1,1
	infested	5,41±1,7	5,12±0,9	6,12±1,8	5,95±1,5
	dewormed	9,23±1,4	9,67±1,1	10,10±1,7	11,05±1,2
Erythrocytes, 1012/l thenormis 6–12	free from infestation	6,58±0,15	7,01±0,23	7,94±0,15	8,41±0,15
	infested	3,95±0,21	4,11±0,15	4,85±0,31	5,21±0,23
	dewormed	6,94±0,15	6,89±0,21	7,45±0,11	7,96±0,25
Leukocytes, 109/l the norm is 6–12	free from infestation	8,79±0,21	8,28±0,37	7,75±0,11	7,84±0,11
	infested	9,64±0,41	10,31±0,25	12,14±0,28	13,41±0,21
	dewormed	8,81±0,14	8,34±0,22	7,45±0,64	7,76±0,22

Lymphocytes, % 109/l the norm is 45–75	free from infestation	43,12±2,73	45,22±1,55	48,3,1±1,94	52,27±1,69
	infested	57,21±1,21	59,14±1,22	57,21±0,94	61,42±1,51
	dewormed	44,31±1,43	45,1,2±1,21	46,34±2,34	44,31±1,43
Monocytes, % the norm is 2.0–4.0	free from infestation	2,45±0,12	2,34±0,27	2,66±0,18	2,65±0,41
	infested	3,15±0,22	3,41±0,16	4,41±0,21	4,31±0,26
	dewormed	2,34±0,24	2,29±0,19	2,54,±0,15	2,61±0,11
Eosinophil, % norm 2.0-6.0	free from infestation	3,87±0,17	4,02±0,31	4,22±0,29	4,51±0,34
	infested	8,45±0,2,8	9,75±0,22	9,87±0,41	10,45±0,28
	dewormed	3,75±0,12	3,95±0,34	4,20±0,34	4,44±0,24
Rod neutrophils, % norm 3.0-6.0	free from infestation	3,81±0,44	4,01±0,15	4,21±0,23	4,42±0,33
	infested	2,23±0,48	2,45±0,44	2,88±0,21	3,21±0,31
	dewormed	3,55±0,23	3,82±0,32	4,01±0,11	4,22±0,34
Segmented neutrophils, % norm 30-75	free from infestation	46,00±1,54	49,24±1,23	52±1,12	54,04±1,41
	infested	23,44±1,42	27,02±1,22	28,44±1,71	31,01±1,21
	dewormed	44,12±1,41	50,22±1,11	50,74±1,41	51,88±1,19

Based on the data shown in Table 2, the average amount of total protein in the blood of horses infected with parascaridosis in the areas of the SSYAP is 60.8±1.8–72.4±0.5g/l in radiation-risk areas, while in horses infected with parascaridosis, on average, respectively , (TRKA, MaxRKA, ZRKA and MinRKA) 5.6%; 18.3%; 16.5% and 8.2% were lower. The total protein content in the blood of dewormed horses is less than 0.5%.

It was observed that the average amount of glucose in the blood of horses free of infection was in the range of 3.5±0.04–4.8±0.01 mol/l, while the average value was 4.12±0.05 mol/l. Glucose levels in infected horses were 35.7% lower than in infected horses. When determining blood glucose 45 days after deworming horses against parascariasis, this indicator was 3.7% lower than in horses infected with parascariasis. [13].

The amount of urea in the blood is in the range of 2.77±0.01–3.27±0.01mmol/l in horses free from parascarides, and it is observed that it deviates from the normal amount, i.e. it decreases. It was found that the amount of urea was also significantly reduced in infected horses. In general, compared to farms free of infestation located in all radiation hazard zones, the amount of urea due to the harmful effects of parascarids was 41.9% in horses of the farm of the village of Bedene located in the zone of extreme radiation hazard, 37.9% in the horses of the farm of the village of Beskaragay located in the zone of maximum radiation hazard, the farm located in the zone of high radiation hazard The amount of urea in horses' blood decreased by 20.6% in Sagyr village horses and by 14.1% in Zantikei farm, which is located in the lower radiation risk zone.

As a result of blood examination 45 days after deworming of horses against parascariasis, it was observed that the amount of urea in farm horses located in all radiation-hazardous areas is 1.0-5.9% less than urea in the blood of horses free from infestation.

The average amount of bilirubin in the blood of infected horses was 8.42±0.77–17.42±0.47 mmol/l. The average amount of bilirubin in the blood of infected horses was

between 16.62±0.22 and 26.95±0.44 mmol/l. Compared to horses free of infection, bilirubin was 42.1% in the horses of the farm of the village of Bedene located in the zone of extreme radiation risk, 66.0% in the horses of the farm of the village of Beskaragay located in the zone of maximum radiation risk, 87.8% in the horses of the farm of the village of Sagyr located in the zone of high radiation risk, and lower The amount of bilirubin in the blood of horses in Zhantikei village, which is located in a radiation hazard zone, increased by 97.3% (2 times). As a result of blood examination 45 days after deworming of horses against parascariasis, it was found that the amount of bilirubin in farm horses located in the zone of extreme radiation risk was 6.3% less than the bilirubin in the blood of horses free of infestation, while in the other three zones it increased by 1.7-11.4%. [14].

Table 2 – Biochemical indicators of horse blood during parascariasis infestation and after treatment of horses

Region name	Practice horses	Total protein (g/l) 57-79	Glucose (mmol/L) 3.5-6.3	Urea(mmol/L) 3,7–8,8	Bilirubin (mmol/L) 5.4-51
Bodene village	free from infestation	60,8±1,8	3,5±0,04	2,77±0,01	17,42±0,47
	infested	57,4±1,3	2,40±0,2	1,61±0,07	24,77±0,42
	dewormed	64,2±0,4	3,4±0,05	2,62±0,02	16,51±0,24
Beskaragaivillage	free from infestation	63,5±0,7	3,5±0,09	2,85±0,04	16,23±0,55
	infested	51,9±0,2	1,9±0,08	1,77±0,05	26,95±0,44
	dewormed	62,2±0,7	3,4±0,05	2,77±0,03	16,51±0,59
Sagyr village	free from infestation	71,7±1,1	4,7±0,04	3,07±0,01	12,12±0,87
	infested	59,9±0,2	3,10±0,07	2,44±0,07	22,77±0,41
	dewormed	68,9±0,4	4,4±0,05	2,89±0,08	13,51±0,32
Zantikei village (MinKRA)	free from infestation	72,4±0,5	4,8±0,01	3,27±0,01	8,42±0,77
	infested	66,1±1,1	3,20±0,09	2,81±0,04	16,62±0,22
	dewormed	71,9±0,9	4,7±0,02	3,24±0,02	9,32±0,44

We believe that all this, of course, is connected with the violation of the absorption of amino acids, proteins, nutrients in the digestive tract, as well as with the toxic effect of parascarides (Table 3).

Table 3 – Mineral composition of horse blood during parascaridosis infestation and after treatment of horses

blood count, mmol/l	Practice horses	Bodene village	Beskaragay village	Sagyr village	Zantikeivillage
Phosphorus 0,7–1,7	free from infestation	1,02±0,03	1,10±0,01	1,42±0,04	1,55±0,02
	infested	0,51±0,01	0,61±0,07	0,74±0,14	0,81±0,04
	dewormed	0,92±0,02	1,00±0,03	1,19±0,04	1,41±0,02
Magnesium	free from infestation	0,71±0,09	0,77±0,11	0,85±0,11	0,97±0,15

0,7–1,1	infested	0,46±0,11	0,51±0,10	0,65±0,08	0,68±0,14
	dewormed	0,68±0,17	0,72±0,14	0,82±0,11	0,96±0,17
Iron	free from infestation	13,41±1,27	15,02±1,14	15,66±1,27	17,04±1,11
	infested	8,61±1,20	8,97±1,31	10,82±0,41	11,22±1,07
	дегельминти-зацияланған	12,78±1,20	14,22±1,11	14,88±1,35	16,22±1,27
Sodium 133–147	free from infestation	122,21±2,34	124,34±4,11	133,21±1,24	138,41±5,66
	infested	109,45±4,11	110,22±2,33	117,22±4,21	121,54±1,47
	dewormed	120,45±5,21	122,28±5,11	128,33±5,33	131,25±6,12
Potassium 2,8–4,7	free from infestation	2,65±0,23	2,71±0,21	2,81±0,20	2,88±0,11
	infested	1,42±0,11	1,47±0,15	1,84±0,14	1,87±0,22
	dewormed	2,54±0,14	2,65±0,12	2,71±0,18	2,74±0,16
Chloride 97–110	free from infestation	94,24±2,14	95,88±3,21	101,21±2,12	103,12±1,22
	infested	75,24±3,54	78,04±2,41	82,14±3,11	84,06±1,22
	dewormed	93,44±1,78	95,08±1,22	100,08±2,22	102,89±1,98

Phosphorus content in horses free from parascarids in farms located in the investigated radiation hazard zone was in the range of 1.02±0.03–1.55±0.02 mmol/l and did not deviate from the normal level. We notice that the amount of phosphorus in the blood of the horses affected by the invasion in those regions has decreased sharply. In general, the amount of phosphorus decreased by 50-55.4% due to the harmful effects of parascarids in farms located in the radiation hazard zone. As a result of blood examination 45 days after deworming of horses against parascariasis, the amount of phosphorus decreased by 9.1-16.2% in farm horses located in all radiation danger zones.

During the study of magnesium in the blood, we see a picture similar to phosphorus indicators. It is noted that the amount of magnesium in horses free from parascarides showed the range of 0.71±0.09–0.97±0.15 mmol/l and did not deviate from the normal level. In farms located in the extreme radiation danger zone, the amount of magnesium decreased by 35.3%, in the maximum radiation danger zone by 33.8%, in the radiation danger zone by 25.6%, and by 29.1% in the low radiation danger zone. According to the data of blood examination after deworming of horses against parascariasis, the amount of magnesium has decreased in the area of radiation danger, compared to the blood of horses free of parascariasis. [15].

As a result of the study of the amount of iron in the blood, this indicator did not deviate from the normal state in the range of 13.41±1.27–17.04±1.11 mmol/l in horses free from infestation. And the amount of iron in the blood of horses in the farm affected by parascaridosis in the zone of extreme radiation danger decreased by 35.8%, in the zone of maximum extreme radiation danger - 40.2%, in the zone of high radiation danger - 30.9%, in the zone of minimal radiation danger - 34.1%. . As a result of blood examination after 45 days of deworming of horses against parascariasis, the amount of iron in all radiation-dangerous areas showed a decrease of 4.6-5.3%.

The amount of sodium in the blood of the horses was significantly altered compared to the infected horses. The amount of sodium in the blood of horses free from parascaridosis infection did not deviate from the normal level in all regions. And the amount of sodium in the blood of infected horses is TRKA - 10.44%; MaxRKA - 11.3%; ЖРКА - 12%; MinRKA decreased by 12.1%. As a result of the blood examination after 45 days after deworming, the amount of sodium TRKA - 1.4%; MaxRKA - 1.6%; ЖРКА - 3.6%; MinRKA - decreased by 5.1%.

If the amount of potassium in the blood of horses free of invasion is within normal range, in horses affected by invasion, this indicator is reduced by 46.4%, 45.7%, 34.5%, 35% depending on each radiation danger zone. Blood tests after deworming of horses showed a decrease of 4.5%, 2.2%, 3.5% and 2.4%.

The amount of chloride in horses free from parascaridosis infestation in farms located in the investigated radiation hazard zone was in the range of 94.24±2.14–103.12±1.2 mmol/l. During the study of the composition of the blood of infected horses, the amount of chloride decreased by 20% in the farms located in the extreme radiation hazard zone, 18.6% in the maximum radiation hazard zone, 18.8% in the low radiation hazard zone, and 18.4% in the low radiation hazard zone. As a result of blood examination after 45 days of deworming of horses against parascariasis, it was observed that the amount of chloride decreased by 0.2-1.1%.

Conclusion. The conducted study on the hematological, biochemical, and mineral parameters of horses infected with parascaridosis reveals significant insights into the physiological impact of this parasitic infection. The findings indicate that parascaridosis induces marked alterations in the blood profiles of affected horses, which can be attributed to the pathological processes initiated by the presence of the parasites.

1. *Hematological Changes*: The analysis of hematological parameters demonstrated a reduction in hemoglobin and erythrocyte counts, leading to the conclusion that parascaridosis can cause anemia in horses. Elevated levels of leukocytes, particularly neutrophils and monocytes, suggest an inflammatory response triggered by the infection. The post-treatment results indicate a normalization of these parameters, reflecting the resolution of the inflammatory process and the restoration of erythropoiesis.
2. *Biochemical Alterations*: The biochemical analysis highlighted a decrease in total protein and glucose levels, suggesting compromised nutritional status and energy metabolism due to the parasitic load. Increased urea and bilirubin levels indicate potential hepatic and renal dysfunction resulting from the parasite’s impact on the horse's metabolism. Following treatment, most biochemical markers returned to normal ranges, indicating a restoration of metabolic function and overall health.
3. *Mineral Composition*: The study also observed significant changes in mineral levels, with reductions in phosphorus, magnesium, and iron. These deficiencies point to disrupted mineral metabolism, which is crucial for various physiological processes. The restoration of mineral levels post-treatment further emphasizes the importance of addressing parascaridosis to ensure the health and well-being of horses.

Overall, the results of this study underscore the detrimental effects of parascaridosis on the health of horses, emphasizing the need for effective diagnostic and therapeutic strategies. The restoration of hematological, biochemical, and mineral parameters following treatment demonstrates the efficacy of appropriate interventions in managing parascaridosis and highlights the importance of monitoring these indicators in equine health management. Future research should focus on exploring the long-term effects of parasitic infections on equine health and developing preventive measures to mitigate the risks associated with parascaridosis.

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ТҮЙІН

Зерттеу Жәбе тұқымды жылқыларының параскаридозбен зақымданған жағдайында олардың қанының гематологиялық, биохимиялық және минералдық көрсеткіштерін зерттеуге арналған, негізгі назар емдеу шараларынан кейінгі өзгерістерге аударылды. Паразитарлық инфекция жылқылардың денсаулығына айтарлықтай кері әсерін тигізіп, гемоглобин мен эритроцит деңгейінің төмендеуіне және минералдық заттардың тапшылығына әкеледі. Зерттеу барысында үш топ жылқы қарастырылды, олардың біреуі бақылау тобы болды. Қан үлгілері дегельминтизация алдында және емдеуден 45 күн өткен соң алынды.

Нәтижелер көрсеткендей, зақымданған жылқыларда гемоглобин деңгейі 23,5–36%-ға, ал эритроциттер саны 13,2–34,2%-ға дейін төмендеген (радиациялық қауіп аймағына байланысты). Дегельминтизациядан кейін бұл көрсеткіштер қалыпты мәндерге дейін қалпына келді. Биохимиялық талдау жалпы ақуыз бен глюкоза деңгейінің төмендеуін, сондай-ақ мочевина мен билирубин деңгейлерінің жоғарылауын анықтады, бұл метаболизмнің бұзылуын және бауыр мен бүйрек қызметінің жетіспеушілігін көрсетеді. Сонымен қатар, фосфор, магний, темір, натрий, калий және хлоридтердің деңгейі айтарлықтай азайғаны тіркелді, бұл минералдық алмасудың бұзылуын айғақтайды.

Алынған мәліметтер параскаридоздың жылқы ағзасына тигізетін зиянын және емдеу шараларының тиімділігін дәлелдейді. Қан көрсеткіштерінің қалпына келуі жылқылардың денсаулығын сақтау үшін тұрақты мониторинг пен уақтылы емдеудің маңыздылығын растайды.

РЕЗЮМЕ

Исследование посвящено изучению гематологических, биохимических и минеральных показателей крови лошадей породы Жабе, зараженных параскаридозом, с акцентом на изменения после проведения лечебных мероприятий. Паразитарное заражение оказывает значительное негативное влияние на здоровье лошадей, вызывая снижение уровня гемоглобина и эритроцитов, а также дефицит минеральных веществ. В исследовании были рассмотрены три группы лошадей, одна из которых служила контрольной. Образцы крови отбирались до дегельминтизации и через 45 дней после лечения.

Результаты показали, что уровень гемоглобина у зараженных лошадей снижался на 23,5–36%, а количество эритроцитов уменьшалось на 13,2–34,2% в зависимости от зоны радиационного риска. После дегельминтизации эти показатели восстанавливались до нормальных значений. Биохимический анализ выявил снижение уровня общего белка и глюкозы, а также повышение уровней мочевины и билирубина, что свидетельствует о нарушениях обменных процессов и функциональных сбоях печени и почек. Также было зафиксировано значительное уменьшение содержания фосфора, магния, железа, натрия, калия и хлоридов, что указывает на расстройства минерального обмена.

Полученные данные подчеркивают ущерб, наносимый параскаридозом организму лошадей, и подтверждают эффективность лечебных мероприятий. Восстановление показателей крови после лечения свидетельствует о важности регулярного мониторинга и своевременной терапии для поддержания здоровья лошадей.