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CHARACTERISTICS OF FORMATION OF NATURAL IMMUNITY IN THE ORGANISM OF THE KARAKUL SHEEP LAMBS

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Annotation. *Studied the features of the formation of natural immunity in the organism of karakul sheep lambs. Determined that in the organism of Karakul sheep lambs, first colostrum (passive), then natural (active) immunity to conditional-pathogenic microorganisms is formed, and the antibody titer in the blood serum of Karakul sheep lambs, which characterizes this immunity, has a wave-like dynamics.*

Key words: serum, conditional-pathogenic microorganisms, immune property, immunity, antigens, agglutinins, antibody titers.

Relevance of the topic. The formation of natural immunity in the organism is directly related to postnatal ontogenesis. In the first days of postnatal ontogenesis, the protective activity of the organism is provided by nonspecific factors and parental antibodies. The baby of the animal receives the parental antibodies through colostrum. Colostrum is close to blood in protein content. Because it contains a lot of albumin and globulins.

The main part of proteins are immunoglobulins, which contain all blood antibodies [2,3]. It is known that although many species of conditional-pathogenic microorganisms live in the environment, some of them play a priority role in this area.

In veterinary medicine, diseases caused by conditional-pathogenic microorganisms (colibacteria, salmonella, pasteurilla, pseudomonas, staphylococcus and streptococcus) occupy a special place among infectious diseases of young animals [1]. Despite the fact that special measures have been developed for their prevention, control and treatment, the urgency of the problem has not decreased [4].

The aim of the research. To study the peculiarities of the formation of natural immunity to conditional-pathogenic microorganisms in the organism of Karakul sheep lambs.

Materials and methods of the research. The researches were carried out on 150 heads, which 3, 5, 10-day old and 60 heads, 1, 3, 6-month-old a total of 210 Karakul sheep lambs in the farm of "Sahoba" of Nurabad district of Samarkand region.

We conducted laboratory researches in the research laboratory of the department of "Anatomy, physiology, surgery and pharmacology of animals".

The determination of the dynamics of collecting antibodies against colibacteria, salmonella, pasteurilla, pseudomonas, staphylococcus and streptococcus in the blood serum of Karakul sheep lambs were carried out in the reaction of agglutination according to Wright.

Research results. Considering that the problem of conditional-pathogenic microorganisms in young farm animals is more acute in our studies, the formation of antibodies in the blood serum of 3, 5 and 10-day-old Karakul sheep lambs and their role

in the formation of colostrum were studied and immunity was analyzed. The main indicators reflecting the colostrum immune status of Karakul sheep lambs against to conditional-pathogenic microorganisms are given according to the results of studies carried out on 50 three-day-old lambs (Table 1).

Table 1. Dynamics of collecting antibodies to conditional-pathogenic microorganisms in the blood serum of Karakul sheep lambs 3-5-10 day-old (M ± m)

№	Spectrum antibodies	Age and number of Karakul sheep lambs		
		3-day-old (n=50)	5-day-old (n=50)	10-day-old(n=50)
1.	Coliagglutinin	1:150±5,7	1:150±5,7	1:130±4,5
2.	Salmonella agglutinin	1:165±4,2	1:170±4,1	1:160±4,3
3.	Pasteurella agglutinin	1:150±5,7	1:150±5,7	1:170±5,9
4.	Pseudomonas agglutinin	1:75±5,7	1:80±5,7	1:60±5,7
5.	Streptococcus agglutinin	1:175±5,7	1:170±5,6	1:210±3,2
6.	Staphylococcus agglutinin	1:150±5,7	1:150±5,7	1:200±3,1

As can be seen from the table, serological analysis of serum of newborn 3-day-old Karakul sheep lambs showed that antibodies to colibacteria - 1:150±5.7, salmonella - 1:165±4.2, pasteurella - 1:150±5.7, streptococcus- 1:175±5.7, staphylococcus - 1:150±5.7, pseudomonas - 1:75±5.7.

Serum of 5 and 10-day-old Karakul sheep lambs is against from 1:130 to 1:150 for colibacteria, from 1:60 to 1:70 for salmonella, from 1:150 to 1:170 for pasteurella, from 1:60 to 1:80 for pseudomonas, from 1:170 to 1:210 for streptococcus and from 1:150 to 1:200 for staphylococcus. It was found that specific agglutinins were present in titers and they had a wave-like dynamics.

These antibodies are passed from mother through colostrum, they indicate the development of colostrum immunity. Naturally, it is aimed at protecting young animals from the corresponding bacteria. In this case, the immune system that passes through the colostrum acts not only as an antibody but also as an antigen. That is, the mother's organism vaccinates its offspring both passively and actively against conditional-pathogenic microorganisms that are common in nature through colostrum. Because colostrum immunity is a product of active immunity in the mother's organism. Nevertheless, to further clarify the issue, we continued research on 60 heads 1,3-month-old Karakul sheep lambs and studied the dynamics of the formation of antibodies against conditional-pathogenic microorganisms in their serum (Table 2).

The table shows that in the blood serum of 1,3,6-month-old Karakul sheep lambs against colibacteria - from 1:55 to 1:150, salmonella - from 1:50 to 1:80, pasteurella - from 1:70 to 1:160, pseudomonads - from 1:50 to 1:110, streptococcus - from 1:50 to 1:170 and staphylococcus - from 1:50 to 1:160 have specific agglutinins in the titer and have a wave-like dynamics. This indicates that a natural immunity is formed in the body of Karakul sheep lambs.

Table 2. Dynamics of collecting antibodies to conditional-pathogenicmicroorganisms in the blood serum of Karakul sheep lambs 1,3,6-month-old(M±m)

№	Spectrum antibodies	Age and number of Karakul sheep lambs		
		1-month-old(n=20)	3-months-old(n=20)	6- months-old(n=20)
1.	Coliagglutinin	1:130±2,54	1:100±2,23	1:55±1,65
2.	Salmonella agglutinin	1:50±1,58	1:50±1,58	1:50±1,58
3.	Pasteurella agglutinin	1:80±2,00	1:70±1,87	1:80±2,00
4.	Pseudomonas agglutinin	1:100±2,23	1:50±1,58	1:50±1,58
5.	Streptococcus agglutinin	1:50±1,58	1:70±1,87	1:60±1,73
6.	Staphylococcus agglutinin	1:140±2,64	1:80±2,00	1:50±1,58

Naturally, this phenomenon affects not only colostrum, that is, passive immunity, but also the formation of active immunity.

Conclusion. Research results show that:

1. It has been established that high titers of antibodies in the blood serum of conditional-pathogenicmicroorganisms from 1:50 to 1:210 are produced in Karakul sheep lambs of different ages.

2. This indicates that in the organism of Karakul sheep lambs, first colostrum (passive), then natural (active) immunity to conditional-pathogenic microorganisms is formed.

3. The titer of antibodies in the blood serum of Karakul sheep lambs, which characterizes this immunity, has a wave-like dynamics.

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СОВРЕМЕННЫЕ МЕТОДЫ ЛЕЧЕНИЯ КЕРАТОКОНЬЮНКТИВИТОВ У ЛОШАДЕЙ

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Изучение заболеваний роговицы и конъюнктивы глаза у лошадей является одной из фундаментальных проблем ветеринарной офтальмологии. Особую актуальность решение этой проблемы приобретает в настоящее время, поскольку с развитием коневодства и конного спорта, частота данной патологии неуклонно