the ovaries. To diagnose this pathology, ultrasound examinations were carried out at mares. The photographs of ultrasound examination are presented and the morphological features of various cysts are described. Based on the results of the study, opinions were given.

***Kewords*:** ovaries, cyst, mare, ultrasound.

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SOME STATISTICAL INDICATORS OF EPIZOOTIC PROCESS OF BOVINE BRUCELLOSIS IN MERKE RAYON OF ZHAMBYL OBLAST

Abstract

The epizootic situation of brucellosis in cattle of the Merke rayon of Zhambyl oblast in 2013-2016 was studied. The following statistical indicators were analysed: prevalence rate, incidence rate, representative indicator. We conducted certification of the rayons across all rural districts and farms.

Incidence rate was high in the spring and lower in autumn, which indicates that, its decline is achieved under favourable conditions and effective interventions and vice versa. In 2013-2015 years, in the rayon, the conditions were unfavourable and the anti-epizootic measures were not carried out expediently. In 2016, measures taken have shown their effectiveness and as a result the level of the representative indicatorhas sharply decreased.

Keywords: bovine brucellosis, statistical indicators, epizootic process, incidence rate and prevalence rate.

Introduction

Animal brucellosis in Kazakhstan is still widespread, stable and along with economic costs, causes a health risk and social harm. Control measures are one of the main problems in the field of veterinary and public health, while huge amounts of money and labour are being spent, but the costs are not very good. This is due to the shortcomings of disease control and the incompatibility of the individual components of these measures and the inadequacy of their compliance with the current socio-economic situation.

Seven republics of the former Soviet Union are now among the 25 countries with the highest incidence of brucellosis in humans. Brucellosis is endemic in all the countries of Central Asia and Eastern Europe, and the national authorities of these countries are trying to combat this disease for many years [1].

In Central Asia, rates tend to be 10 times higher, thus havingtriple digits. Registered cases among people fluctuate between 116 in Kazakhstan and 362 in Kyrgyzstan.

A World Bank study (not published in 2011), the total return on investment in the brucellosis control measures was evaluated by the net present value of 44.6 million USD in Kazakhstan, 55.1 million in the Kyrgyz Republic, 17.3 in Tajikistan and 18.3 million in Uzbekistan. Strategies for controlling brucellosis in large ruminantsare less effective. Serological studies and slaughter of the positively reacting animals are not always cost effective in control measures against brucellosis in cattle or in its elimination. The reasons for the lack of progress in each country require carefulanalysis.

Monitoring program for large ruminants in the first place based on test- and- slaughter policy in those countries that have capable and adequately resourced national veterinary services. Brucellosis seroprevalence in large ruminants are not adequately controlled or if recent surveys are statistically valid, static over the last 10 years or more. Several countries (Azerbaijan,

Kazakhstan, The Former Yugoslav Republic of Macedonia) reviewing their test-and –slaughter policyin the light of the lack of progress and the high costs. Participants also fully support the recognition that cross-sectoral cooperation between veterinarians and experts in the field of public health is essential for the technically efficient and effective strategy to combat brucellosis at the national level [3].

In 2010 a comprehensive epizootological monitoring of bovinebrucellosis was carried out on the scale of the Republic of Kazakhstan, epizootic situations were identified in all areas and administrative and economic structures. The ways of improving the methods to combat the disease in accordance with the shape the economic and social situation and the international requirements [4]. Since then there are no published data on similar studies, and studies on the effect of anti-epizootic measures on the state of epizootic process of brucellosis in cattle.

In this regard, we have set a goal - to study some statistical indicators of the epizootic process of brucellosis in cattle in the Merke rayon of the Zhambyl oblast.

Material and methods

We used reports of the regional veterinary laboratory (CFT, RBT, AT and ELISA), as well as annual reports of the "Department of veterinary" of the local executive body of the Merke rayon to assess the situation on bovine brucellosis in Merke rayon of Zhambyl oblast in 2013-2016 years.

The following statistics were defined with a view to fully describe the epizootic process: incidence rate, representative indicator and epizootic index.

Incidence rate - occurrence of new cases of the disease. It is expressed by the absolute number of new cases of the disease or their ratio by 100, 1000, 10,000, etc. in the susceptible population over a certain period of time.

Representative indicatoris an indicator of the degree of accessibility of perception and reflection of the compared phenomena; expressed as a percentage when comparing the disease incidence rate in one year with another year. Expressed in absolute and relative, as well as in average values. In the calculation of the last one of the values is taken as 100 or 1, and others are calculated according to the proportion to it.

Epizootic Index - ratio of the duration of the disease presence to the duration of the analysed period of time.

We conducted a certification within the area in the context of rural districts. At the same territory of the region was certified for brucellosis in groups: officially free from brucellosis, A, B and C.

Officially free from brucellosis (OFB):there are no positively reacting animals in administrative territory of the rayon during the past 12 months, according to official diagnostic tests conducted with coverage of not less than 90% of the number of animals.

Group A: administrative territory of the rayon during the past 12 months, according to official diagnostic tests covering at least 90% of the animal population, where percentage of positively reacting animals should not exceed 0.25.

Group B: administrative territory of the rayon during the past 12 months, according to official diagnostic test conducted with coverage of 90% of the animal population, where percentage of reacting does not exceed 1.5.

Group C: administrative territory of the rayon in the last months of the official diagnostic tests conducted with coverage of not less than 90% of the animal population, where percentage of positively reacting animals is more than 1.5.

Results of the study

We determined seasonal incidence in 2013-2016 to evaluate the intensity of the epizootic process brucellosis in cattle (Table 1).

Table 1 –Incidence of bovine brucellosis in Merke rayon of Zhambyl oblast for 2013-2016

No.	Ruraldistricts, farm name	2013		2014		2015		2016	
		Spring	Autumn	Spring	Autumn	Spring	Autumn	Spring	Autumn
1	Merke	0.21	0.07	0.21	0.07	0.34	0	0.1	0.05
1.1	Taldy-Bulak farm	0.15	0.4	0.28	0	0.29	0.58	0	0
2	Zhambyl	0.12	0	0.24	0	0.18	0.06	0	0
2.1	Nart farm	0.28	0	0.27	0	0.16	0	0	0
3	Sarymolda	0.06	0.18	0.12	0	0.06	0.18	0.19	0
4	Zhanatogan	0	0	0.48	0.24	0.23	0.7	0.12	0.35
5	Andas batyr	0.2	0.2	0.1	0.18	0.6	0	0.2	0.1
6	Kenes	0,15	0.1	0.16	0.47	0.26	0.39	0	0.38
7	Oital	0.27	0	0.42	0.14	0.25	0.25	0.13	0.25
8	Tatti	0.7	0.13	0.41	0.55	0.13	0.26	0.4	0.13
9	Aspara	0.52	0.52	0	0.22	0.47	0.94	0.47	0
10	Aktogan	0.12	0.35	0.24	0	0.56	0.22	0.22	0.22
11	Akaral	0.3	0	0.14	0	0.53	0.7	0	0.44
12	Akermen	0.7	0	0.35	0.18	0.16	0.32	0.14	0.14
13	Surat	0	0	0.36	0	0.34	0.34	0.47	0.3
14	T.Ryskulov	0.22	0.11	0.11	0.23	0.42	0.53	0.43	0.1
14.1	Zhailau farm	0.24	0	0	0	0.12	0.25	0,15	0
	By rayon	0.21	0.11	0.22	0.11	0.28	0.28	0,15	0.1

As can be seen from Table 1, mainly in all rural districts, incidence is higher in the spring, with the exception of the Taldy-Bulak farm, in rural districts of Sarymolda, Aktogan, Surat in 2013, Andas batyr, Kenes, Tatti, Aspara, T. Ryskulov in 2014, in the Taldy-Bulak farm, Sarymolda, Zhanatogan, Kenes, Tatti, Aspara, Akaral, Akermen, T. Ryskulov and Zhailau farm in 2015, Zhanatogan, Kenes, Oita, Akaral in 2016. Since studies are conducted throughout the year using the same methods, one can draw a conclusion about the dynamics of the epizootic process in the analysed years. So, the incidence is high in spring, below the autumn shows that under favourable conditions and effective measures, it is reduced and vice versa.

The incidence rate is 2013 compared to 2014, etc. is given in Table 2, which shows the dynamics of the epizootic process in the case of brucellosis in cattle representative indicatorgiven as percentage.

Table 2 - Indicator clarity of brucellosis in cattle of Merke rayon of Zhambyl oblast from 2013 to 2016

No.	Ruraldistricts, farm name	Incidence rate		representative indicator,%	Incidence rate	representative indicator,%	Incidence rate	representative indicator,%
		2013	2014		2015		2016	
1	Merke	0.13	0.12	92.3	0,15	125	0.09	60
1.1	Taldy-Bulak farm	0.26	0.13	50	0.39	300	OFB	0
2	Zhambyl	0.05	0.1	200	0.1	100	OFB	0
2.1	Nart farm	0.12	0.12	100	0.07	58.3	OFB	0
3	Sarymolda	0.1	0.05	50	0.1	200	0.08	80
4	Zhanatogan	OFB	0.32	0	0.42	131	0.21	50

5	Andas Batyr	0.18	0.12	66.7	0.27	225	0.14	51.8
6	Kenes	0.14	0.28	200	0.29	103.6	0.17	58.6
7	Oital	0.12	0.25	208.3	0.23	92	0.17	74
8	Tatti	0.35	0.43	122.8	0.18	42	0.24	133.3
9	Aspara	0.4	0.1	25	0.63	630	0.21	33.3
10	Aktogan	0.2	0.1	50	0.35	350	0.20	57
11	Akaral	0.13	0.06	46	0.56	933	0.20	35.7
12	Akermen	0.3	0.24	80	0.22	91.6	0.12	54.5
13	Surat	OFB	0.16	0	0.30	187.5	0.35	116.6
14	T.Ryskulov	0,15	0.34	226.6	0.43	126.5	0.24	55.8
14.1	Zhailau farm	0.1	OFB	0	0.17	0	0.07	41
	By rayon	0,15	0,15	100	0.25	166.6	0.12	48

So, when comparing the prevalence ratefor the 2013-2014, representative indicatorwas over 100% in Zhambyl, Kenes, Oital, Tatti and T. Ryskulov rural districts. In 2015 compared with 2014 representative indicatorrose everywhere. In 2016, only in the rural districts of Tatti and Surat, this indicator was higher than 100%, amounting to 133.3 and 116.6 respectively.

Thus, the analysis shows that in 2013-2015, conditions were unfavourable and the anti-epizootic measures were not carried out expediently in the Merke rayon. In 2016, the measures taken have shown their effectiveness and as a result the level of the indicator of visibility has sharply decreased.

There are only 14 rural districts in the Merke rayon. Of these, in 2013, only 2 were free of brucellosis and classified as "OFB" (Table 3). 9 rural districts and two farms where incidence is less than 0.25% are classified as group "A". Territories of 3 rural districts and one of the peasant economies (Taldy-Bulak farm) were assigned to the group "B".

Table 3 - Certification of the areas and epizootic index of brucellosis in cattle of Merkerayon of the Zhambyl oblast in 2013-2016

No.	Rural districts, farm name	2013	2014	2015	2016	Epizootic index
		Status				
1	Merke	A	A	A	A	1
1.1	Taldy-bulak farm	A	A	A	OFB	0,75
2	Zhambyl	A	A	A	OFB	0,75
2.1	Nart farm	A	A	A	OFB	0,75
3	Sarymolda	A	A	A	A	1
4	Zhanatogan	OFB	A	A	A	0,75
5	Andas Batyr	A	A	A	A	1
6	Kenes	A	A	A	A	1
7	Oital	A	A	A	A	1
8	Tatti	A	A	A	A	1
9	Aspara	A	A	A	A	1
10	Aktogan	A	A	A	A	1
11	Akaral	A	A	A	A	1
12	Akermen	A	A	A	A	1
13	Surat	OFB	A	A	A	0,75
14	T. Ryskulov farm	A	A	A	A	1
14.1	Zhailau farm	A	OFB	A	A	0,75
	By rayon	A	A	A	A	1

In 2014, Taldy-Bulak farm, Asparaand Akermen rural districts were reclassified as group “A” and the area of Zhanatogan, Surat rural districts from group "OFB" were reclassified to group "B", Kenes - from "A" assigned to "B". In 2016 the territory of 7 rural districts transferred from the class "B" to "A", Taldy-Bulak farm from "B" to "OFB", the rural district of Zhambyl from group "A" to "OFB".

Conclusion

Thus, in Merke rayon of Zhambyl oblast for the 2013-2016 an epizootic situation on brucellosis in cattle was studied. The following statistics were analysed: incidence rate, prevalence rate, and the certification of the rural districts and farms across the rayon.

All statistical indicators are characterized by the epizootic situation and results of control measures: incidence is high in the spring and lower in autumn, suggesting that its decline is achieved under the right conditions and effective interventions and vice versa. In 2013-2015 in Merke rayon, conditions were unfavourable and anti-epizootic measures have been taken not expediently. In 2016, the measures taken have shown their effectiveness and as a result the level of the representative indicatorhas sharply decreased.

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ЖАМБЫЛ ОБЛЫСЫ МЕРКІ АУДАНЫНДА СИЫР БРУЦЕЛЛЕЗІ КЕЗІНДЕГІ ІНДЕТ ПРОЦЕСІНІҢ КЕЙБІР СТАТИСТИКАЛЫҚ КӨРСЕТКІШТЕРІ

Аңдатпа

Жамбыл облысы, Меркі ауданында 2013-2016 жж. сиыр бруцеллезінен індеттік жағдай анықталды. Келесі статистикалық көрсеткіштер талданды: шалдығу көрсеткіші, жаңадан шалдығу көрсеткіші, көрнекілік көрсеткіші. Аудан территориясы барлық ауылдық округтер мен шаруа қожалықтары көлемінде сертификатталды.

Жаңадан шалдығу көрсеткіші көктемде жоғары, күзде төмен болып, қолайлы жағдайда және тиімді шаралар жүргізгенде оның төмендеп және керісінше болатыны анықталды. 2013-2015 жж. ауданда жағдай қолайсыз болып, індетке қарсы шаралар жөнсіз іске асырылған. Ал 2016 ж. жасалған шаралар өз тиімділігін көрсетіп, көрнекілік көрсеткіші бірден төмендеген.

Кілт сөздер: сиыр бруцеллезі, статистикалық көрсеткіштер, індет процесі, шалдығу және таралу көрсеткіштері.

Ильгекбаева Г.Д., Сагынбек А.А., Белгибай Т.

НЕКОТОРЫЕ СТАТИСТИЧЕСКИЕ ПОКАЗАТЕЛИ ЭПИЗООТИЧЕСКОГО ПРОЦЕССА ПРИ БРУЦЕЛЛЕЗЕ КРУПНОГО РОГАТОГО СКОТА В МЕРКЕНСКОМ РАЙОНЕ ЖАМБЫЛСКОЙ ОБЛАСТИ

Аннотация

Изучены эпизоотическая ситуация по бруцеллезу крупного рогатого скота в Меркенском районе Жамбылской области за 2013-2016 гг. Были анализированы следующие статистические показатели: индекс заболеваемости, индекс инцидиентности, показатель наглядности. Проведена сертификация территории района в разрезе всех сельских округов и крестьянских хозяйств.

Инцидиентность была высока весной, ниже осенью, что свидетельствует о том, что при благоприятных условиях и эффективных мероприятиях достигается его снижение и наоборот. В 2013-2015 гг. в районе условии были неблагоприятными и противо-эпизоотические мероприятия проведены не целесоообразно. В 2016 г. проводимые меры показали свою эффективность и в результате уровень показателя наглядности резко снизился.

Ключевые слова: бруцеллез крупного рогатого скота, статистические показатели, эпизоотический процесс, индекс пораженности и заболеваемости.

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ИММУНОМОДУЛЯТОР ТИМАЛИНДІ БҰЗАУЛАРДЫҢ ДИСПЕПСИЯ АУРУЫНА ҚАРСЫ ҚОЛДАНУ ТИІМДІЛІГІ

Андатпа

Мақалада иммуномодулятор тималинді бұзаулардың диспепсия ауруына қарсы әсері туралы мәліметтер келтірілген. Зерттеу барысында алынған деректер аталған препаратты кешенді түрде қолдану диспепсия ауруымен ауырған бұзауларға тиімді емдік әсер ететіндігі және олардың салмақ қосу көрсеткіштерін айтарлықтай жоғарылатуға септігін тигізетіндігі туралы мәліметтер келтіріледі.

Кілт сөздер: тимоген, тимолин, иммуномодулятор, диспепсия, резистенттілік.

Кіріспе

Қазіргі таңда ауылшаруашылығы жануарларының резистенттілігін арттыру, өсіп–даму функциясын жақсарту, сонымен қатар олардан сапалы, әрі жетілген төл алу және де Республика тұрғындарын сапалы мал өнімдерімен қамтамасыз ету қазіргі кезде мемлекетімізде ең бір өзекті мәселелердің бірі болып табылады. Ауыл шаруашылығы жануарларында, оның ішінде төлдер арасында ас қорыту жүйесі аурулары, оның ішінде диспепсия, жиі кездеседі, ол көптеген негативті факторларға тікелей байланысты, атап айтқанда, күтіп-баптау ережелерінің тиісті деңгейде сақталмауы, зоогигиеналық шаралардың дұрыс жолға қойылмауы, азықтандыруының тиісті талаптарға сәйкес келмеуі ж.т.б. [1, 2]

ҚР АШМ-нің статистикалық деректерінің мәліметі бойынша жануарлардың ас қорыту жүйесі ауруларынан өлім-жітім 7-18 %-ға дейінгі аралықты қамтиды.