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EPIZOOOTOLOGY AND DIAGNOSTICS OF CONTAGIOUS ECTHYMA
OF SHEEP AND GOATS IN TURKESTAN REGION
Abstract. The pace of the country’s economic recovery largely depends on the successful development of agriculture, including animal husbandry and one of its important branches of sheep breeding. Currently, there are about 25,000 sheep in the rural district "Shanaksky" of Kazygurt district. Sheep are located in three settlements. Pasture keeping of animals is practiced with almost year-round grazing of sheep. Only during the period of breeding company and under unfavorable conditions, animals are put on stable maintenance. Moreover, the nascent young are kept indoors almost around the clock until the onset of warm days. Here the sheep are fed with combined feed and hay.

Keywords: epizootology, sheep, goat, eczema.

INTRODUCTION

Lambs are taught to feed from about 1 month of age. The average yield of offspring per 100 queens is 95-98 lambs. A number of unfavorable factors, one of which is infectious diseases, prevent increasing the productivity of sheep, obtaining large offspring from it, and increasing their safety.

At the present time, the economy is unfavorable for such infectious diseases as paratyphoid, necrobacteriosis, brucellosis and contagious eczema. The contagious sheep herd in the rural district "Shanasky" is registered for many years, so the farm is considered unfavorable sheep and goat herd.

According to the reporting data, this disease was first established on the farm in 1975. In recent years, the disease has been regularly observed in lambs in the spring and summer period of the year. Due to the timely implementation of general and specific measures, the disease is currently registered in the form of sporadic cases or small outbreaks.

EXPERIMENTAL PART

This is evidenced by the results of a survey of herds in the locality of Akzhar conducted by us during the months of February to October 2021, which are presented in the table 1.

As can be seen from Table 1, contagious eczema is recorded in all flocks of the department. Moreover, the largest number of lambs with contagious eczema was found in the flock of Abdrashov N (16 heads), which is 2.5% of the examined lambs. However, the highest percentage of infection of lambs with eczema was shown by lambs from the flock of S. Torebaev (5.8%).
**Table 1**

**Incidence of lambs with ecthyma in flocks of the rural district "Shanaksk"**

<table>
<thead>
<tr>
<th>№ herd</th>
<th>Full name of shepherd</th>
<th>Number of lambs</th>
<th>Number of sick lambs</th>
<th>Percentage of sick lambs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Abdrashov N.</td>
<td>618</td>
<td>16</td>
<td>2.5</td>
</tr>
<tr>
<td>2</td>
<td>Suleev I.</td>
<td>320</td>
<td>12</td>
<td>3.7</td>
</tr>
<tr>
<td>3</td>
<td>Torebaev With</td>
<td>153</td>
<td>9</td>
<td>5.8</td>
</tr>
<tr>
<td>4</td>
<td>Bayseitov S.</td>
<td>450</td>
<td>10</td>
<td>2.2</td>
</tr>
<tr>
<td>5</td>
<td>Yerzhigitov K.</td>
<td>245</td>
<td>8</td>
<td>3.3</td>
</tr>
</tbody>
</table>

**RESULT AND DISCUSSION**

According to the literature data, the greatest sensitivity to contagious ecthyma is observed in young animals. Most often, the disease is recorded from the first days of life to 6-8 months of age. The observations carried out by us in the rural district "Shanak" also the data of veterinary reporting show that in the conditions of the economy among sheep, the disease is most often observed among lambs of 3-8 months of age, relatively less often among 3-4 months of age and among newborns, and among adults, they are almost never registered. To illustrate the above, Table 2 shows data for 2015-2021.

**Table 2**

**The incidence of contagious ecthyma of sheep by sex and age groups in the Shanaksky rural district for 2015-2021.**

<table>
<thead>
<tr>
<th>Years</th>
<th>Totalsick animals</th>
<th>Suckling lambs 15-45 days of age</th>
<th>Suckling lambs 3-8 months of age</th>
<th>Lambs 3-4 months of age</th>
<th>Adult sheep</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>237</td>
<td>15</td>
<td>124</td>
<td>74</td>
<td>24</td>
</tr>
<tr>
<td>2016</td>
<td>211</td>
<td>13</td>
<td>133</td>
<td>65</td>
<td>-</td>
</tr>
<tr>
<td>2017</td>
<td>205</td>
<td>21</td>
<td>105</td>
<td>69</td>
<td>10</td>
</tr>
<tr>
<td>2018</td>
<td>314</td>
<td>26</td>
<td>184</td>
<td>104</td>
<td>-</td>
</tr>
<tr>
<td>2019</td>
<td>102</td>
<td>29</td>
<td>56</td>
<td>17</td>
<td>-</td>
</tr>
<tr>
<td>2020</td>
<td>62</td>
<td>20</td>
<td>42</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2021</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 2 shows that contagious ecthyma of sheep from 2015 to 2021 was recorded among lambs 3-8 months of age and 3-4 months of age, and the relatively low incidence of lambs of the same age in 2019 and 2020 is apparently associated with the acquisition of immunity after preventive vaccinations at a young age.
Mortality and forced slaughter has been low in recent years. The unequal incidence of contagious ecthyma in sheep in different years has been noted by many researchers. According to most authors, outbreaks of contagious ecthyma are often recorded in the spring-summer and autumn seasons.

In Kazakhstan, according to GI Lopatnikov (1972), E. Balgambaev (1973), R. Tulemisov (1973) and other researchers, the highest incidence of contagious ecthyma is observed from April to June and from July to October. In the rural district "Shanak", according to our observation, often the disease of lambs with contagious ecthyma occurs in the spring and summer seasons. In April, the disease takes on a fairly significant spread. Around May, there is a sharp increase in the incidence of lambs, and by autumn the disease is extremely rare.

Sick animals were the source of the causative agent of the disease and contributed to the rapid spread of infection among spring lambing lambs, and therefore, the incidence of lambs in April-May begins to increase rapidly. However, thanks to protective vaccinations, the incidence of contagious ecthyma in lambs is sharply reduced.

Many researchers associate the occurrence of outbreaks of contagious ecthyma among lambs with two main points:

1. The presence of close contact between lambs highly sensitive to contagious ecthyma, which occurs most often when they are crowded in the premises.
2. Injury to the skin and mucous membranes with roughage and their remains used as feed and bedding.

In this regard, it was of some interest to clarify the main cause of the disease in the rural district "Shanaksk".

The study of the conditions of feeding and keeping sheep, carried out in the Akzhar settlement, showed that the keeping and feeding of sheep during the period of the brood company, as well as in other settlements throughout this period, is kept in close quarters with the lambs. Under these conditions, contact between lambs and ewes leads to trauma to the mucous membranes of the skin and lips, which, apparently, is the main reason for the spread of contagious ecthyma among lambs. Summer outbreaks of the disease in pastures are mainly explained by trauma to the
mucous membranes of the oral cavity and skin by coarse grasses and thorny plants, of which in the mountain-steppe zone are more common: camel thorn, Persian rose, Albert's rose, Iberian cornflower.

As our studies have shown, the infection of an animal occurs mainly through the damaged mucous membrane of the oral cavity and skin of the lips. At the same time, trauma occurs with thorny seeds and labial stems of plants. As a result, in lambs, contagious ecthyma appears in stomatitis and labial forms. Picture 1.

![Acute stomatitis with damage to the lips and gums](image1)

In our studies, the diagnosis of contagious ecthyma was established on the basis of epizootological data, as well as a clinical study.

To confirm the diagnosis, we carried out electron microscopic studies of the pathological material obtained by us from sick lambs. The material for the study was carefully cut nodules from the affected skin of a lamb's lip. Rice. 2.

Electron microscopy was performed on an EMV-100 with an instrumental magnification of x 25000-45000. As a result, characteristic oval-shaped virions of the contagious ecthyma of sheep were found in the studied preparations. The capsule wall contains 10-11 parallel filaments with transverse striation (Fig. 2).

![Virions of contagious ecthyma of sheep](image2)
CONCLUSION

Thus, we can conclude that in the Shanaksr rural district, the disease of contagious ecthyma among lambs occurs during the brood company and spreads rapidly in the summer, affecting older young animals. In the autumn periods of the year, the disease is extremely rare. The cause of the disease in lambs is the possible infection of animals with a virus that persists in the crusts, on the soil, microtrauma of the skin and mucous membranes of the oral cavity. Injury occurs during grazing in the pasture when the skin of the face of the lamb comes into contact with thorny plants, as well as with the rough bedding materials of the premises where they are kept. The final diagnosis can be established by electron microscopic examination of smears prepared from the nodules of the affected areas of the skin of the lips of sick lambs.

References:
5. Edited by A.A. Sidorchuk, -Infectious diseases of animals. Textbooks and teaching aids for students of higher educational institutions M. Kolos S, 2007, -671 p.