Aspects Regarding the Coprological Pollution Level in Some Sheep Helminthiasis

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Abstract
The investigations on the incidence and intensity of parasitism in some endoparasites in sheep performed on 376 animals (260 sheep and 116 young adult sheep) Turcana breed, Gilău area, Cluj County, indicated an increased incidence in trichostrongilidys of 72.7% in young sheep and 65.0% in adult sheep. The incidence of monesya had different values depending on age group, 45.5% at young sheep and 10.0% in adult sheep. The data obtained regarding the prevalence of hepatobiliary trematodosys of sheep in the study, indicates similar values for the two categories, 27.2% young sheep and 30.0% for adult sheep. Instead the extensivity of lung strongilatosys showed notable differences between the two groups of animals, 18.1% at young sheep and 35.0% in adult sheep. The cop microscopic pollution degree with trichostrongily eggs in correlation with age group, indicated a dominance of low infestation (50% young sheep and 61.5% adult sheep). In exchange, the data obtained on parasitism intensity with cestode oncospheres expresses a dominance of medium infestation (60.0%) in young sheep and the low (10.0%) in adult sheep. The intensity level of Hepatobiliary trematodosys parasitism in the young sheep showed a dominance of small and medium infestations (37.5%) and in adult sheep is dominant only at low infestations (45.4%). The larvae strongilatosys parasitism intensity in the lung detected similar values in the two age groups (50.0% in young sheep and 17.2% in adult sheep).

Keywords: helmints, incidence, larvae.

1. Introduction
Helminthiasis are widespread diseases around the world, that affect animals and man. They produce various disorders, dependent on their location, in various tissues, organs or systems [1,2]. For animal breeding sector, their presence to all animal rent species, is an important factor for economic losses, irrecoverable sometimes, especially in the sheep breeding area. For these reasons, the majority of sheep farmers know the importance of some helminthiasis and make great material and financial efforts, to reduce their incidence, especially those very serious like young sheep monesia, hepatic trematodiasis, gastro-intestinal-pulmonary strongilidosis, and others [2,3]. Although we have currently a wide range of anthelmintic medicinal products, for all that, the incidence of some of helminthiasis in sheep is high, aspect which prompted us to evaluate in a private unit of sheep in sub-mountainous area of Cluj County.

2. Materials and methods
Research on the incidence and intensity of gastro-pulmonary helminthiasis in sheep, were carried out in a village close to Cluj-Napoca city, in spring 2012, on a population of 376 sheep (260
sheep and 116 young adult sheep), of the previous year, Ţurcană breed, private property. The flock is in good maintenance condition and feed consists in daily grazing land in the area, supplemented by a concentrates ration (corn, barley, wheat) and hay mixed with barley and wheat straw. The farm has a wooden shelter, with a storage capacity of 500 animals and an arranged room for the working staff. 31 coprological samples were randomized collected, 20 from adult sheep and 11 from young sheep. Coprosocical examinations were taken, using enrichment coprological methods (Willis flotation method, active sedimentation method and Baermann method). The intensity of studied gastro-pulmonary helminthiasis parasitism was determined by the following protocol:

- low infestation: 1-5 eggs/larvae per microscopic preparation
- medium infestation: 5-10 eggs/larvae per microscopic preparation
- massive infestation: exceeding 10 eggs/larvae per microscopic preparation

3. Results and discussion

The evaluation of the main digestive and pulmonary helminthiasis incidence, of the studied flock of sheep, by age group, are presented in table 1.

The data presented in Table 1 shows different levels of incidence in digestive and pulmonary helminthiasis, studied in correlation with the age and parasitic disease. Thus, in trichostrongylidosis at sheep, at both age categories, is found an increased incidence (72.7% in young sheep and 65.0% in adult sheep). It is known that trichostrongylidosis are cosmopolite diseases, with a relatively high frequency in sheep maintained on pasture. It helps in maintaining the natural features of parasitosis. Sometimes real explosions are present due to very active invasive growth phenomenon, at the trichostrongylus female when laying eggs [2,4,5]. The moniesiosis incidence in sheep shows notable differences (45.4% in young sheep and 10.0% in adult sheep). Anoplocephaliasis appear as seasonal diseases, on pasture, with enzootic character, their development being influenced by levels pasture pollution with caprophag mites, infested with cysticercoid larvae, responsible for the emergence and evolution of disease outbreaks. In fasciolosis, copro-microscopic examination indicates extensive values, 27.2% in young sheep and 30.0% in adult sheep. These values are quite high given the importance of parasites on the health and economic damage. Most times making animal treatments, without taking into consideration the correct program of environmental antipollution measures (pasture and drinking water source) is followed by intensive egg-laying of helminths [1,5]. Regarding the high level of pulmonary strongylidosis, the values obtained from adult sheep are almost double compared to young sheep (35.0% vs. 18.1%). The pulmonary strongylidosis, is also a group of pasture helminthiosis, with regional and summer season character, on pastures with high levels of moisture (meadows, northern mountainsides or rainfall years). Graphical presentation of the main elevated digestive and pulmonary helminthiasis in sheep by age category is shown in fig. 1.

Parasitism intensity level in the main digestive and pulmonary helminthiasis at the studied flock of sheep, on age groups is presented in Table 2.

Data from the intensity of parasitism in the main digestive and respiratory helminthiosis, reflects different values of the coproparasitic load, correlated with the age and type of helminth infestation. Thus, in trichostrongylidosis, both in young sheep and in adult sheep dominate the low infestation (50% of positive samples - young sheep and 61.5% - adult sheep) [6,7].

<table>
<thead>
<tr>
<th>Age group</th>
<th>Samples</th>
<th>Trichostrongylidosis</th>
<th>Moniesiosis</th>
<th>Fasciolosis</th>
<th>Dictiocaulosis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Positive</td>
<td>%</td>
<td>Positive</td>
<td>%</td>
</tr>
<tr>
<td>Young sheep</td>
<td>11</td>
<td>8</td>
<td>72.7</td>
<td>5</td>
<td>45.4</td>
</tr>
<tr>
<td>Adult sheep</td>
<td>20</td>
<td>13</td>
<td>65.0</td>
<td>2</td>
<td>10.0</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>21</td>
<td>67.7</td>
<td>7</td>
<td>22.5</td>
</tr>
</tbody>
</table>
It is known that pollution sources are particularly trichostrongylidosis infected sheep, with or without clinical manifestations, to which the potential polluter is increased, do to the high level of infestation which often exceeds 45 to 90% of the population. However, outbreak and nature of epidemiological source disease are also influenced by climatic factors (rainfall, temperature, season), that appear directly on the development and survival of invasive parasitic elements. In contrast, in moniesiosis the young sheep are the main "beneficiary" of positive charge, dominating average manifestations (60%) and large (40%), compared with adult sheep to which are present only traces of low infestations (10%). It is recognized that the clinical course of the disease is specific to young sheep, especially in the first year of grazing, and the clinical severity is correlated with pollution levels in the pasture with coprophagia mite (intermediate hosts), and the presence of disease in adult sheep, as the natural vector and carrier parasite. In hepatic trematodosis, the obtained data on the intensity of parasitism reflects only the presence of low infestation (100.0%) in young sheep and a dominance of medium infestation (50.0%) in adult sheep. At sheep, trematodosis are generally chronic diseases, with a clinically polymorphic table, due to parasites aggressiveness that present one mechanical way of acting, irritator, rapacious, toxic and inoculating [2,8,9]. Regarding at the variability of parasitism intensivity of dictiocaulosis, in young sheep were found only 2 animals with low and average infestation (25%). In contrast, in adult sheep, of those 7 positive cases detected, low infestations are dominant (57.2%). Mention the fact that, even though the infestation is low in both age groups, their presence is a warning signal, because in the further evolution may be increase in intensity during summer grazing, in environmental condition with abundant rainfall. They are very serious disease, dominated by the exudative tracheobronchitis syndromes with sultry effect.
4. Conclusions

Our investigation, regarding extensivity and intensivity of parasitisms in some digestive and pulmonary helminthiasis, on a population of 375 sheep, traditionally reared and structured on two age groups, highlights the following:

1. Trichostrongylidosis have a high incidence in young sheep (72.7%) and adult sheep (65.0%) with an average of 67.7%.

2. In moniesiosis, we have a high incidence of parasitisms in young sheep (45.4%) and a low incidence in adult sheep (10.0%).

3. Hepatic trematodosis have similar values in both age groups, respectively 27.2% in young sheep and 30% in adult sheep.

4. The extensivity level of pulmonary strongylidosis is 18.1% in young sheep and 35.0% in adult sheep.

5. The copromicroscopic pollution levels in trichostrongylidosis, correlated with the age category, shows a dominance of low infestations, 50.0% in young sheep and 61.5% in adult sheep.

6. Intensity of parasitism with anaplocephala oncospheres, shows a dominance of medium infestation (60.0% in young sheep, and in adult sheep only 10.0%).

7. In hepatic trematodosis, the copoparasitary intensivity level, are highest in low infestations (100.0% in young sheep and 50.0% in adult sheep).

8. In hepatic and pulmonary strongylidosis, the intensivity of parasitism has similar values in both age groups (50.0% in young sheep and 57.2% in adult sheep).

References