The Incidence Increasing of Sheep some Diseases Caused by Heavy Rainy Spring of 2010 in the West Part of the Country

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Abstract
As a result of heavy rains from spring of 2010 became to appear, after two months of animals maintaining in high humidity conditions, some health problems. Were been examined by clinical point of view 280 sheep from four herds of Timiş district particular breeders from Transilvanian Merinos and Ţurcană breeds, 2-5 years aged. In the same time were been taken samples from foot lesions of affected sheep and were been examined from morpho-pathological point of view the 29 sheep bodies slaughtered by necessity. After all examinations was been observed that 197 sheep (70.35%), more than half from examined animals had foot lesions and respiratory clinic signs caused by exceeded rains from last months. From the necessity slaughtered sheep bodies were been isolated larvae from *Dictyocaulus filaria, Oestrus ovis* and adults of *Psoroptes ovis,* parasites who had found optimum conditions of development and to produce infections in rainy springs, with water and mud remained long time on pastures. From foot samples was been isolated in Microbiology laboratory *Fusobacterium necrophorum*, a bacteria responsible of interdigitally dermatitis in sheep. All these problems caused by heavy rains had as results important economic damages through milk and wool decreased productions and high costs with antiinfectious and antiparasitical treatments.

Keywords: Dictyocaulus filaria, Fusobacterium necrophorum, interdigitally dermatitis, Oestrus ovis, Psoroptes ovis.

1. Introduction

A spring with too much rain in 2010 offered to many microorganisms good conditions of life and development in sheep herds from the west part of the country. Water remains weeks and months on the pastures, quality of food decreased and became a major problem for sheep breeders, who couldn't found a dry pasture, a dry place for their animals. All these rains offered favourable development conditions to parasites depending in their biologic circle by a high percent of humidity. Some parasitic diseases evolutions depend on many biotic and abiotic factors. The biotic factors are represented by number of intermediary and definitive hosts and the abiotic factors are represented by climatic conditions and geographic position.

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The matures parasite individuals of some species can ensure last spring for their descendants very good conditions of life, with increased probability of finding intermediary hosts and to infect the definitive hosts. In these conditions of high percent of humidity survived a great number of larvae and the probability to infect sheep increased [1, 2]. A similar situation was in the case of some germs implicated in foot infection appearance, because sheep were carried on wet pastures every day or were maintained in places with water and dejections, conditions when were been created entrance ways for germs, involving foot infection in different development degrees [3].

2. Materials and methods

The study was been performed on 280 sheep from four herds of Timiş district particular breeders from Transilvanian Merinos and Ţurcana breeds, 2-5 years aged. All sheep were been examined by

clinical point of view. A number of 29 sheep were been slaughtered by necessity and morphopathological examined. In the same time were been taken samples from foot lesions in affected sheep for bacteriological examination. In the laboratory of Microbiology these samples were inoculated on special mediums of culture with blood, amino acids and glucose. After inoculation, samples were been incubated 24 hours at 37º Celsius [4].

3. Results and discussion

The morphopathological examination of 29 sheep slaughtered by necessity revealed that 16 sheep (55.17%) heads presented in nasal ducts first and second instar *Oestrus ovis* larvae and local irritativ-inflamatory lesions induced by these parasites (table 1.)

Table 1. The slaughtered sheep morphopathological examination results

Diagnosed animals	Number	%	Mean body weight /group (kg)	Body weight limits in this sheep category (kg)
Sheep with oestrosis	16	55.17	41	35 - 47
Sheep with psoroptic mange	5	17.24	32	29 - 35
Sheep with dictiocaulosis	8	27.59	37	33 - 41
Total	29	100	-	-

To a number of 5 (17.24%) slaughtered sheep were been observed erythemata, vesicles and crusts on derma from the inferior cervical region and saddle with portions of relapsed wool. In crusts of these regions were been observed with magnifying-glass alive parasitic mites *Psoroptes ovis*. At 8 sheep were been observed Dictyocaulus filaria first instar larvae in tracheobronchial secretions examination. The most decreased mean body weight was been registered in the case of slaughtered sheep group with psoroptic mange (32 kg) followed by group with dictiocaulosis (37 kg) and oestrosis group (41 kg).

The obtained results in the case of clinical examination of 280 sheep revealed that 132 sheep (47.14%) had foot lesions manifested on lameness on variable intensity (table 2).

Table 2. Results of sheep clinical examination

Diagnosed animals	Number	%	Mean body weight /group (kg)	Body weight limits in this sheep category (kg)
Sheep with foot lesions	132	47.14	41.5	35 – 48
Sheep with pale mucoses, mucous and mucopurulent nasal drains	44	15.72	47.5	43 – 52
Sheep with foot lesions and respiratory clinic signs	65	23.21	39	35 - 43
Healthy sheep	39	13.93	58	54 - 62
Total	280	100	-	-

At the local affected area palpation was been observed sensitivity and inflammation of interdigitally space as a result of animal maintenance in a wet medium. A number of 65 sheep (23.21%) had foot lesions combined with respiratory clinic signs like catharal rhinitis with sneeze, dyspnoea, serous and seromucous nasal drains. The same sheep group registered the most decreased mean body weight (39 kg), followed by foot lesions group (41 kg). At a group of 44 (15.72 %) sheep were been observed pale mucoses, mucous and mucopurulent nasal drains. From 280 examined sheep only 39 (13.93%) were been found healthy. In Microbiology laboratory, after incubation of inoculated cultures mediums from foot lesions isolates were been identified Fusobacterium necrophorum, polimorphus bacteria, uncapsulated, unsporulated, anaerobic, Gram negative, immobile, with moderate turbidity with evident deposit on liquid culture mediums and small colonies on solid medium. This bacteria elaborates a thermolabile exotoxin and an endotoxin with role in necrosis appearance. The disease caused by Fusobacterium necrophorum is named necrobacilosis and affect the sheep, cattle, pigs, rabbits and horses foot [5]. Disease

appearance in domestic animals is conditioned by factors like humidity and hygiene deficiencies.

4. Conclusions

From a number of 280 clinic examined animals 132 (47.14%) were with foot lesions and different degrees of lameness, 65 (23.21%) with lameness and respiratory clinic signs, 44 (15.72%) with pale mucouses and respiratory clinic signs and only 39 (13.93%) were healthy. The most decreased mean body weight was 39, in the case of sheep with lameness and respiratory clinic signs. In the case of necessity slaughtered sheep were been identified parasites larvae (*Oestrus ovis, Dictyocaulus filaria)* and adults (*Psoroptes ovis)*. All these parasitic and bacterial infections were caused by exceeded humidity as a result of heavy rains from the last months. Maybe in summer and autumn will appear clinic signs of *Fasciola hepatica* infection, because high quantities of water on pastures created optimum conditions for intermediary hosts of the parasite larval forms.

The only chance for breeders remained treatments with drugs against all these parasites, mechanical cleaning of lesions from affected foot sheep and an improvement of life animals conditions. All these impose more expenses than economic losses caused by affected sheep body weight and productions decreases.

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