Therapeutic and post-lesional aspects of enzootic pneumonia in pigs

Aspecte lezionale și post-terapeutice în pneumonia enzootică la suine

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Abstract

The mycoplasmas are causing significant economic damage, these conditions being constant attention of farmers and veterinary services. Economic losses may be due to mortality, veterinary restrictions, a decrease in meat production, increased feed consumption and expenditure specific therapeutic and control measures. The conducted reaserches aimed at methods of disease treatment and diagnosis of enzootic pneumonia based on morphopathological lesions (macroscopic and histopathological)in dead pigs cases.

Rezumat

Micoplasmozele produc pagube economice importante, aceste boli fiind în atenţia permanentă a fermierilor şi a serviciilor sanitare veterinare. Pierderile economice pot fi consecinţa mortalităţii, a restricţiilor sanitar-veterinare, a scăderii producţiilor de carne, creşterii consumului specific de furaje şi a cheltuielilor cu măsurile terapeutice şi de combatere. Cercetările efectuate au avut ca scop metode de tratament a bolii, şi stabilirea diagnosticului de pneumonie enzootică pe baza leziunilor morfopatologice (macroscopice şi histopatologice) în cazul suinelor decedate.

Introduction

Enzootic pneumonia is seen not more in pigs, the sensitivity to the disease being present after 6 weeks of age when maternal immunity is low.

Pigs can become contaminated since the first days of life, but the disease appears only after that age.(2, 5, 6, 7, 12,)

1. Materials and methods

The research was conducted in December 2010 in Smithfield, New Peciu farm.

On the basis of clinical signs was suspected swine enzootic pneumonia, a disease that has a high incidence in intensive swine breeding system.

In order to reduce the economical losses caused by the disease was intervened with drugs.

It was curative given oral soluble Dimetridazole powder in doses of 25 mg / kg body weight / day for 5 days administered compound feed swine.

Vitamins were administered simultaneously to increase the treatment efficiency.

2. Results and Discussion

The outbreak treatments were performed in a group of 800 heads.

The treatment results were good, however there were 18 deaths.

These were caused by a more severe evolution of the disease. In the deceased cases, the necropsy was performed through mammalian's specific technique in order to study both macro-and microscopic lesions in this disease.

At necropsy, at lungs level, predominantly in cranial lobes, medial and in the front third of caudal lobes, foci were

sharply demarcated from normal tissue, red purple and gray, both on the surface and on section.

The consistency in these areas was high and docimasia was positive. (1, 8, 9, 11, 14)

The mediastinal and traheobronhical lymphnodes were enlarged in volume and weight and on section had a wet look.

These issues are presented in Figures 1, 2, 3 and 4.

Histopathology revealed hypertrophy of alveolar walls due to lymphohystocytaris hyperplasia, lympho-histiocytic per bronchitis and per vascular with concentric appearance and peeling of the alveolar endothelium.

These issues are presented in Fig. 5, 6, 7, 8, 9, 10, 11.

The researches on the 18 corpses are shown schematically in a table form and graphical form (Table 1, Figure1).

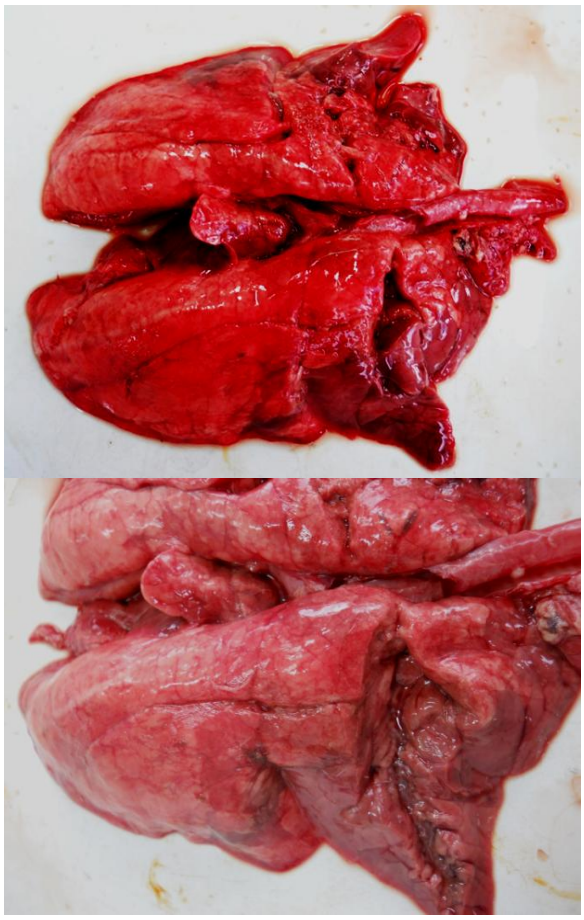

Figure 1. Pig lung. Catarrhal bronchopneumonia-acute phase (up)-chronical phase (down)

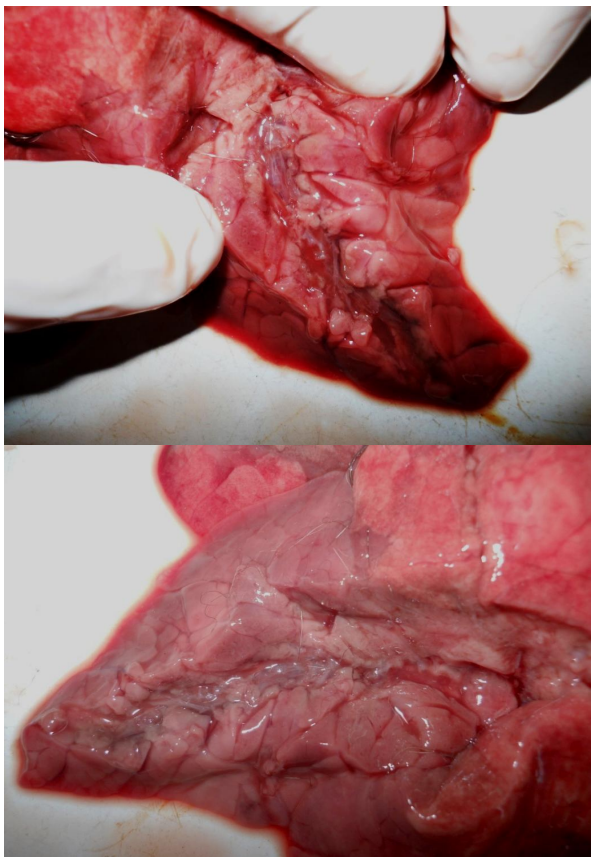

Figure 2. Lung. Catarrhal bronchopneumonia (section) - acute phase (up) phase chronical (down)

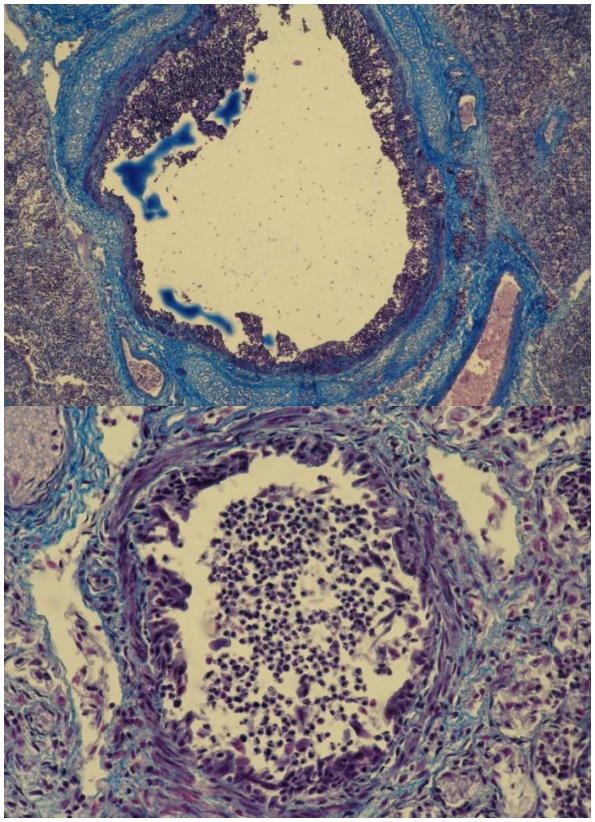

Figure 3. Peribronchitis limphohistiocitare (objective x 10) (left) and (objective x 40) (right)

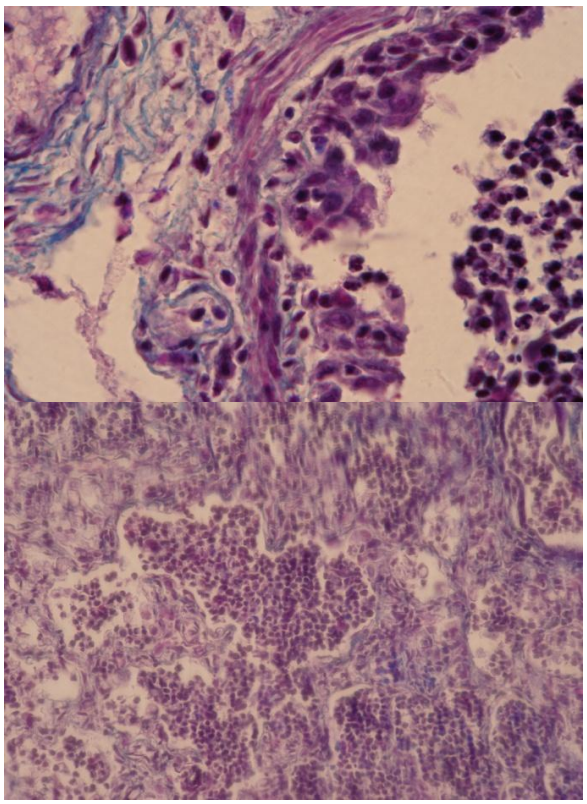

Figure 4. peribronchitis Lymphohystocytaris (objective x 10) (up) and (objective x 40) (down)

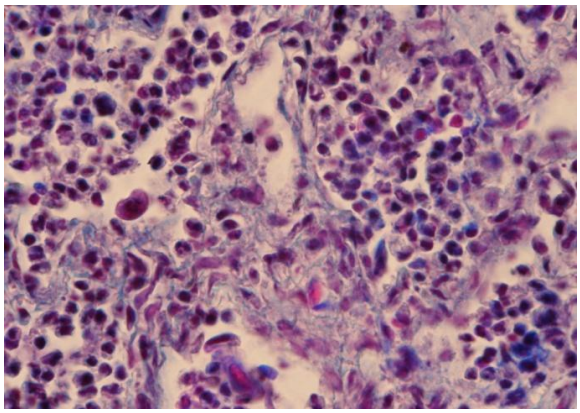

Figure 5. lymphohystocytic circumscribed hyperplasia (objective x 100)

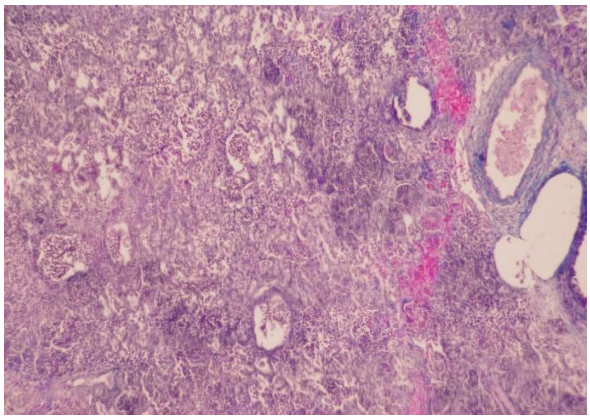

Figure 6. Perivascular lymphohystocytic (objective x 40)

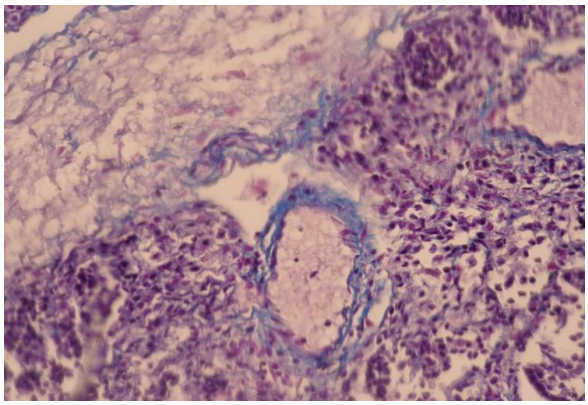

Figure 7. Perivascular limphostiocitare (objective x 100)

Discussion

The disease occurred in piglets older than 6 weeks and has evolved with increased morbidity confirming literature.

The dimetridazole treatment was efficient, however recorded losses or mortality but low percentage meeting.(3, 4, 10, 13, 14, 16, 17)

Conclusions

- The treatment with oral powder dimetridazole gave good results were the losses percentage was under 5%.
- Diagnosis of enzootic pneumonia was confirmed in all bodies of study.
- On all the examined bodies, the lesions were localized mostly in the cranial and medial lobes.
- only in 5 examined bodies was found in addition beside the pulmonary localization of the cranio-medial lesions, another location in the front third of the diaphragm lobes.
- On 11 bodies examined was surprised splenization stage of catarrhal bronchopneumonia and in 7 bodies pancreatising phase was surprised.
- In all the bodies examined were found lympho-hystocitary per bronchitis and peri-vascularitis lesions circumscribed lympho-histiocytic hyperplasia.

Table 1.

Panel presentation lesion

LUNG LOCATION					
Nr. crt	**Localization in the cranial lobes and medial**	**Localization in the cranial lobes, medial and caudal**	**Acute phase**	**Chronic phase**	**Peribronchitis LH PerivascularitisLH Circumscribed LH hiperplasia**
1	+	+	+	-	+
2	+	+	+	-	+
3	+	+	+	-	+
4	+	+	+	-	+
5	+	+	+	-	+
6	+	-	+	-	+
7	+	-	+	-	+
8	+	-	+	-	+
9	+	-	+	-	+
10	+	-	+	-	+
11	+	-	+	-	+
12	+	-	-	+	+
13	+	-	-	+	+
14	+	-	-	+	+
15	+	-	-	+	+
16	+	-	-	+	+
17	+	-	-	+	+
18	+	-	-	+	+

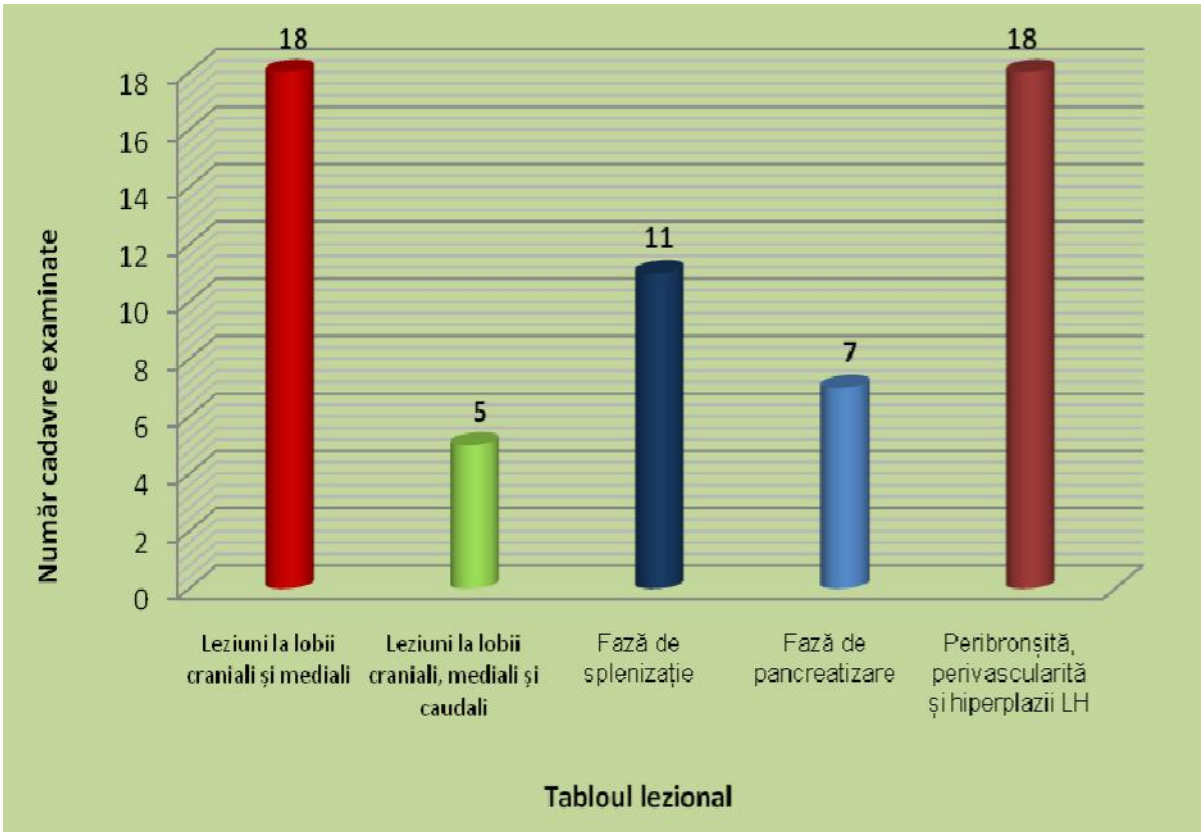

Chart 1. Lesions presentation

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