Abstract

The present study describes the reasons of post-weaning distress in Estonian pig herds. Here we examined the natural cases of *Lawsonia intracellularis* and porcine circovirus 2 (PCV2) infection and co-infections.

The presence of *L. intracellularis* in swine herds were tested by PCR and by histopathological methods, whereas PCV2 was detected by real-time-PCR and immunohistochemical stainings. Seven of the 11 investigated herds with signs of post-weaning wasting were infected with *L. intracellularis* and all 11 herds with PCV2.

From the analysed samples 22.2% were infected with *L. intracellularis* and 25% with PCV2. The results of microbiological studies suggested that the piglets suffered from enteritis and pneumonia. *Escherichia coli* and *Pasteurella multocida* often aggravated the process of illness. The frequency of *L. intracellularis* was high in pigs 7-12 weeks old (18.5-42.7%) and PCV2 infection was too high in pigs 7-12 weeks old (24.8-32.7%). *E. coli* was often a co-factor with *L. intracellularis* and PCV2.

The primary reasons of post weaning wasting were PCV2 and *E. coli*, later aggravated by *L. intracellularis* and other pathogens. Our results indicated that different pathogens have an important role in developing post-weaning wasting.

Proliferative intestinal inflammation caused by *L. intracellularis* is mainly characterised by its localization and morphological findings. The main gross lesions were the enlargement of mesenteric lymph nodes and thickening of the wall of ileum. In post-weaning multi-systemic wasting syndrome there are characteristic histological lesions in lymphoid tissues. They consist of a variable degree of lymphocyte depletion, together with histiocytic and/or multinucleate giant cell infiltration. This basic lymphoid lesions is observable in almost all tissues of a single severely affected animal, including lymph nodes, Peyer's patches and spleen. Sporadically, multifocal coagulative necrosis may be observed.

Keywords: *Lawsonia intracellularis*, Porcine Circovirus type-2