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Veterinarni Medicina

Changes in the content of neuropeptides in intestinal lymph nodes of pigs suffering from experimental *Brachyspira hyodysenteriae* infection

Lakomy M., Winnicka A., Wasowicz K., Zmudzki J., Kaleczyc J., Sienkiewicz W., Podlasz P.:

Veterinarni Medicina, 54 (2009): 315-323

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The studies were performed in order to investigate the mutual interrelationship of the peripheral nervous system and particular types and sub-types of lymphocytes located in the intestinal lymph nodes of the pig. Using the ELISA method and the flow cytometry the tissue concentration of VIP, SP, GAL and SOM, as well as the number of lymphocytes containing antigens CD2, CD21, CD4, CD5, CD8 and TCRgamma/delta were determined. As compared to 4-months old pigs of the control group, in 4-months old pigs in which experimental enteritis was induced with *Brachyspira hyodysenteriae* infection, a statistically significant increase in SP and GAL concentration

was shown in the lymph nodes. No statistically significant differences in the concentration of VIP and SOM were detected. As regards changes in the lymphocyte subpopulations of CD21+, CD4+/CD8+ and TCRgd+/CD8– (regarded as a subpopulation of NK cells) lymphocytes, the mean frequency of CD21+ changed from 50.05% in control pigs to 25.82% in animals suffering from dysentery, the number of CD4+/CD8+ lymphocytes changed from 6.98% to 18.97%, and at the same period, the subpopulations of TCRgd+/CD8– lymphocytes changed from 17.76% to 0.38%.

Keywords:

pig; neuropeptides; lymphocytes; dysentery; intestinal lymph nodes

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