CYTOLOGICAL CHANGES IN ENDOMETRIUM OF SOWS DURING OESTRUS CYCLE AND ANOESTRUS

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Summary. The aim of performed research was to define morphological changes in the uterus endometrium of sows with disturbed reproduction during the oestrus cycle and anoestrus condition and to study changes of progesterone and estradiol-17β concentration in blood plasma.

Cytological investigations of sows with disturbed reproduction endometrium were carried out for the first time, infiltration of the immune cells during different stages of oestrus cycle and anoestrus condition were studied.

Histological investigation of uterus horns leads to the conclusion that during different stages of oestrus cycle in different layers of uterus are observed quantitative and qualitative changes of cells. During different stages of oestrus cycle lymphocytes, plasma cells and macrophages prevailed in sows’ endometrium. During oestrus lymphocytes prevailed in the glandular epithelium, stroma and luminar epithelium of endometrium. In addition, positive correlation between the number of lymphocytes in luminar endometrial epithelium and in stroma and glandular layer was defined (r=0.4 and r=0.2; p<0.01). During dioestrus in endometrium stroma and during early dioestrus in glandular layer prevalence of eosinophils was stated (p<0.05). The most noticeable infiltration of neutrophils was registered in luminar and glandular epithelium layers of endometrium during pathological anoestrus condition, while no eosinophils and macrophages were found in any layer of endometrium (p<0.05).

Keywords: sow, reproductive disturbances, endometrium, immune cells, anoestrus.