

POSTWEANING MULTISYSTEMIC WASTING SYNDROME OF PIGLETS, PATHOMORPHOLOGICAL AND IMMUNE-PATHOLOGICAL CHARACTERISTICS

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The author identifies the main pathomorphological and immune-pathological characteristics of the post-weaning multi-systemic wasting syndrome of piglets. It is established that in the organism *PMWS / PCV2-SD*-piglets, pathomorphological changes in lymphoid organs and tissues are universal and characterized by focal or diffuse productive (proliferative) inflammation (macrophagic and fibroblastic), as a result of circovirus-induced necrosis and apoptosis of lymphocytes and the development of immune-pathological reactions that irreversibly violates the protective and barrier properties of the organs and the realization of functions characteristic of the structures concerned.

The complex of other pathological processes consisting of degenerative, necrotic and inflammatory changes of non-lymphoid structures is a consequence of the loss of organs of their protective and barrier properties in parallel with the replacement of parenchymal structures by stromal structures and the development of fibrosis of the loose fibrous connective tissue.

Defeat of immunocompetent cells leads to the development of an immunodeficiency state and, as a result, co-infection with bacterial-viral pathogens and a variety of manifestations of pathomorphological changes.

The studies conducted to identify pathogen associations in *PMWS / PCV2-SD*-affected pigs do not give us grounds for positioning *PCV2* as the only infectious agent responsible for the emergence of this pathology. The isolation of opportunistic microorganisms at *PCV2*-systemic disease, indicates the immune-pathological changes in the body of dead piglets, and the simultaneous co-infection of pigs with several infectious agents, indicates the development of an immunodeficiency state. The results of our studies show that *PCV-2* most clearly implements its own immunosuppressive properties in combination with bacterial-viral associates.

During immune-histochemical examination, the most pronounced immune staining was found in lymphoid tissue — 81,3-56,3 %, as well as in lungs — 68,8 %, intestines — 37,5 % and liver — 31,3 %. In the overwhelming majority, the immune response to the *PCV2* antigen was manifested in reticular cells.

Intensity of immune staining was proportional to the amount of *PCV2* antigen in organs and tissues, with an expression level of immune-histochemical markers from 20 to 50–70 %.

Key words: POSTWEANING MULTISYSTEMIC WASTING SYNDROME, PCV2-SYSTEM DISEASE, MACROSCOPIC CHANGES, MICROSCOPIC CHANGES, LYMPHOID ORGANS AND TISSUES, EXPRESSION LEVEL, IMMUNE-HISTOCHEMISTRY STAINING.