

MORPHOGENESIS OF THE SPLEEN IN VERTEBRATES

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The spleen is a peripheral organ of hematopoiesis and immunogenesis that provides multifunctional hematological properties that can actively participate in complex immunological and immunopathological reactions in the body. Histological, immunological properties of spleen were studied for a long period, but today they clarified not enough. However, in the present were described the morphological properties of spleen of the animals in the age aspect using modern research methods - electron microscopic, immunohistochemical, cytochemical.

Analysis of correspondence of immune cells in different compartments of white and red pulp of spleen can be the basis for optimization of setting of histopathological diagnosis in clinical practice.

The purpose of research is to consider the characteristics of the microscopic structure of the spleen in vertebrates during phylogenetic development.

In this article were examined the morphogenesis in fish, birds, rodents, mammals. The prototype of spleen is a cluster of the reticular tissue in cyclostomes fish. In the remaining fish (cartilage ray) this tissue forming a true spleen. Spleen develops from the mesenchyme. In embryos of sheep spleen lays between the two holistic leaves of mesenchyme near the bottom of abomasum. In the initial stage of development the fibrous mesenchymal frame, vascular and reticular stroma are formed, which is populated with stem cells and macrophages. Spleen in birds arises in the wall of the abdominal cavity, begins to form on the 4th day of incubation and form the clusters of mesenchyma, with a plot that contains a single erythroblast.

As a special organ spleen appears in the early stages of the evolution of vertebrates. It was found that the fetus until birth has sufficient morphological maturity spleen. In the postnatal ontogeny period the function of hematopoiesis is retained only in rodents and fish. The spleen able to regenerate and extramedullary hematopoiesis, spleen undergoes to age involution.