

Hematopoietic components and their microenvironment in calves' bone body during the newborn stage

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The morphological features of hematopoietic components and their microenvironment in calves' bone body studied using a complex of morphological methods.

The researches have shown that calves in a newborn stage are characteristic morphological incomplete structural components of bone. Calves in newborn stage, have a bone, which consists of bone and cartilage tissue, bone marrow and blood vessels. Spongy bone (primary and secondary) and rough-fiber formed beams, which have different orientation. In its marrow (osteoblast and red) and blood vessels. The studied bone tissue is presented by compact bone and spongy. Compact bone tissue is located under the cambial layer of the periosteum. It appears on the periphery diaphysis of femur bone, ribs and tail of vertebrae and is presented on the surface of bone beams containing osteoblasts.

The structure of sponge bone and bone marrow has general biological patterns and depends on the placement of a bone body. Trabecular of rough-fiber primary spongy bone tissue and arc-form capillaries create microenvironment for osteoblast marrow. Between osteoblast bone marrow are located hemopoiesis centers, the area of which increases as the transformation of primary sponge bone in the secondary. Marrow cavities of primary sponge bone have strait arc-form blood capillaries filled with erythrocytes. Trabecula of secondary bone tissue and sinusoidal capillaries are microenvironment for the formation and functioning of red bone marrow. Transformation of red marrow in yellow helps reduce the number of sinusoidal capillaries and the emergence mesh of capillaries general type. Transformation of red bone marrow in yellow helps to reduce the number of sinusoidal capillaries and the emergence mesh of the general type capillaries.

Bone organs, bone and cartilage tissue, marrow, blood vessels, morphofunctional status of the body, newborn stage, calves