

The Histomorphology of Adrenal Glands in Marten of Northern Belarus

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Marten (*Martes martes*) in the Republic of Belarus is widespread and is a regular kind of indigenous fauna. Because of the high quality of fur and a large enough number of marten promoted to leading positions in hunting country.

Adrenal glands were obtained from the marten (n = 13). All individuals sampled were older adult males shot as trophies by sport hunters during the winter season. Glands were cleaned of fat, longitudinally cut into three pieces, with the right and left adrenal preserved in 10% neutral-buffered formalin for histological analysis using light microscopy. After fixation, the tissue samples were embedded in paraffin wax, sectioned at five to seven microns, and stained with Haematoxylin and Eosin.

The microscopic anatomy of the marten adrenal gland contained an outer capsule, consisting of collagen fibers, surrounding the surface of the gland. The cortex contained the typical zonation of mammalian adrenals with the zona glomerulosa being the outermost zone followed by the zona fasciculata and then the zona reticularis. The zona glomerulosa contained primarily cuboidal cells. The constituent cells are highly columnar and are horizontally stratified to form a single cell wide cord which forms an arcade at the capsular end of the zone. The zona fasciculata appears to be directly abutted to the base of the zona glomerulosa, with no connective capsular tissue present. The cells are mostly strong cuboidal and arranged in single cell width columns which run radially towards the medulla. In some samples small clumps of erythrocytes were found inside the sinusoids. The zona reticularis is formed by polyhedral cells, arranged as a network of anastomosing cords and plates, separated by large sinusoids. The adrenal medulla is clearly demarcated from the cortex. There is no evidence of a medullary capsule separating the cortex from the medulla. The glandular cells of the medulla were primarily cuboidal and often appeared in a pinwheel or circular fashion surrounded by connective tissue with a central vein.

Keywords

Marten, morphology, zoology, adrenals, mammalian.