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Research Article

MORPHOLOGICAL CHARACTERISTICS OF THE UTERUS OF WHITE OUTBRED RATS

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ABSTRACT

Using light microscopy methods, the histological structure of the uterus of white outbred rats at the level of the body and cervix was clarified. It has been established that the walls of the right and left uterine horns grow together, forming a double body and neck. Whose cavities remain separated from each other by a thin septum and open into the vagina with two separate openings. The area of fusion of the medial walls is characterized by the union of the perimeter and the supravascular layer of the myometrium. The data obtained can be used to illuminate the relevant sections of reference and educational literature when writing sections on evolutionary, functional, comparative species morphology and reproductive biology. Based on the histological study, it was established that in rats, despite the general type of uterine structure, there are significant differences that mainly affect their lower segment at the borders.

KEYWORDS

Uterus, cervix, white outbred rats, myometrium, smooth myocyte.

INTRODUCTION

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The study of animal templates, the development of animals and the methods of their management, their reproduction processes, are some of the pressing problems of the time. Basic knowledge shows the structure of laboratory animals, and we can understand the mechanisms of differentiation, abnormal histo - and Organogenesis, as well as contribute to greater depth and purpose. A better understanding of morphological bases, relationships between tissues during development, renewal, and restoration can help study multi-tissue systems. From laboratory animals, due to the onset of the most favorable and rapid puberty for a century and a half, the short duration of embryogenesis and the short period of postpartum stretching involution are rats and rabbits. The presence of animal material was achieved to ensure the purity of the samples. An analysis of the literature shows that there are many unanswered questions related to the rest the structure of some organs and organ systems is new, in particular, it concerns the genital area; that is, the uterus is the sections of its caudal parts associated with the formation of the body and neck at the level of insertion. There are also many unresolved problems, related to the structure of its caudal part, and especially its appearance at the microscopic level. The smooth muscle is still not well understood. Myometrial tissue in the caudal part of the uterus, as you know, is characterized by originality. What functions it performs and does it to the maximum extent during endocrine dependence, pregnancy and childbirth. The practical significance of this information can be useful for biologists, veterinarians and, perhaps, Obstetricians-Gynecologists, I think.

Taking into account the above, the purpose and comparative analysis of the study, with the histostructural Organization of the uterine wall of the rat, its caudal part was taxied in modern histo-cytological methods.

Research objective. Expanding knowledge of the morphological structure of the female genital organs, in particular the uterus in rats.

MATERIAL AND METHODS

The work used 15 bats ranging from 4 months to 1 year. The uterus was used as an object of study. The Material was ivitized to a 10% buffered formalin solution. The placement of the material was carried out on a histological closed-type vacuum Leica ASP 300 processor. The material used Histomix paraffin from the BioOpticamiz firm. The cuts were made in a rotor Microtome 6-7 μm thick. The work used methods of light microscopy, painting cuts with hematoxylin and eosin dye. Immunogystochemical testing of caudal tissue was also performed. The ratio of the uterine section to actin in smooth muscles was carried out using a set of monoclonal antitanours. The establishment of an immunogystochemical reaction was achieved with a one-step imaging system.

Results and analyzes. The squid uterus contains a pair of horns, body and neck, and the uterine horns join in a

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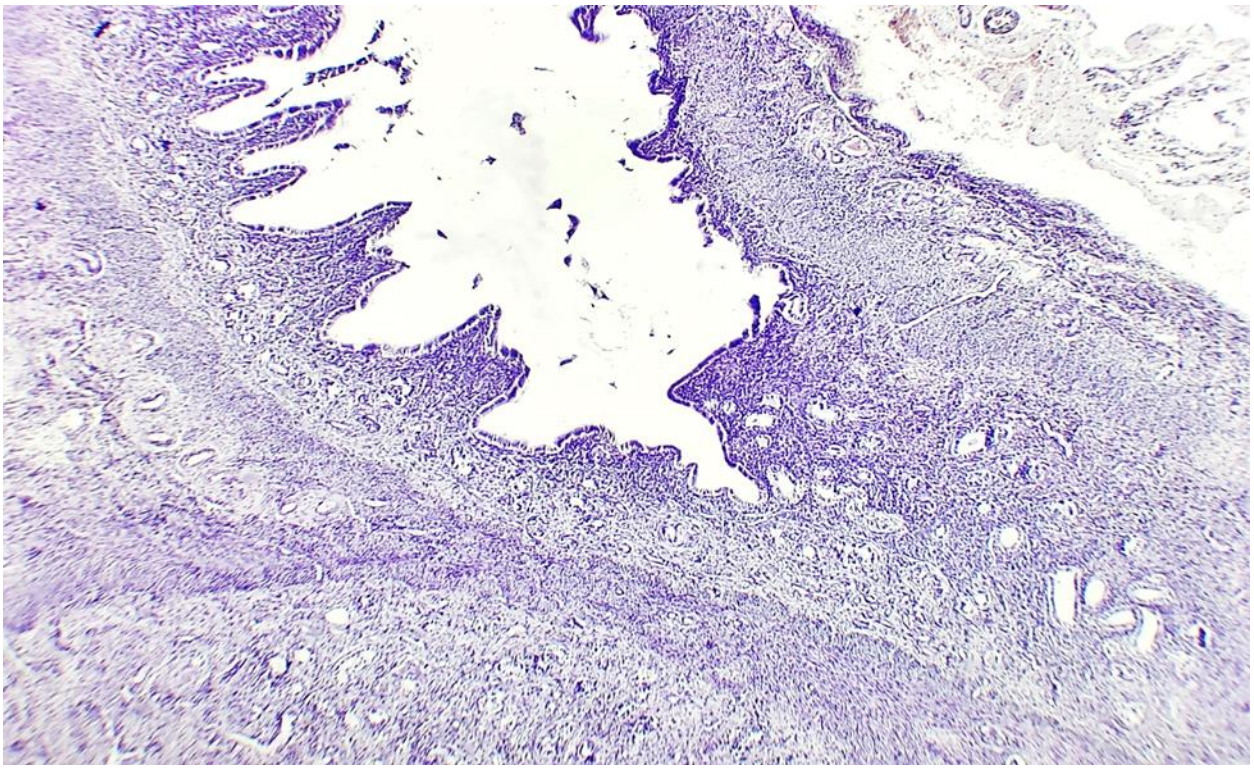
caudal direction to form the body and neck, but their cavities are separated by a barrier and open with two independent holes in the vagina. It should be noted that in basic education, veterinary and monographic applications in development biology in rats, according to the basic classification of bacadon, the uterus is defined as bipartite, that is, the Union of bodies to form a single cervical hole. With complex study, this question becomes clear that the uterus should be classified as two-horned the uterus of rats.

A histological examination found that the wall of the branches, body and cervix has a similar structure and consists of three walls: endometrium (mucous membrane), myometrium (muscle) and perimetry (serosis).



(Figure 1). Horn and glands of the uterus of a white broodless rat. Coloring: with hematoxylin and eosin.

The mucous membrane forms a relief in the form of folds that become more pronounced on the neck (fig. 2). The formed endometrium forms in two layers (plates): epithelial and specific.

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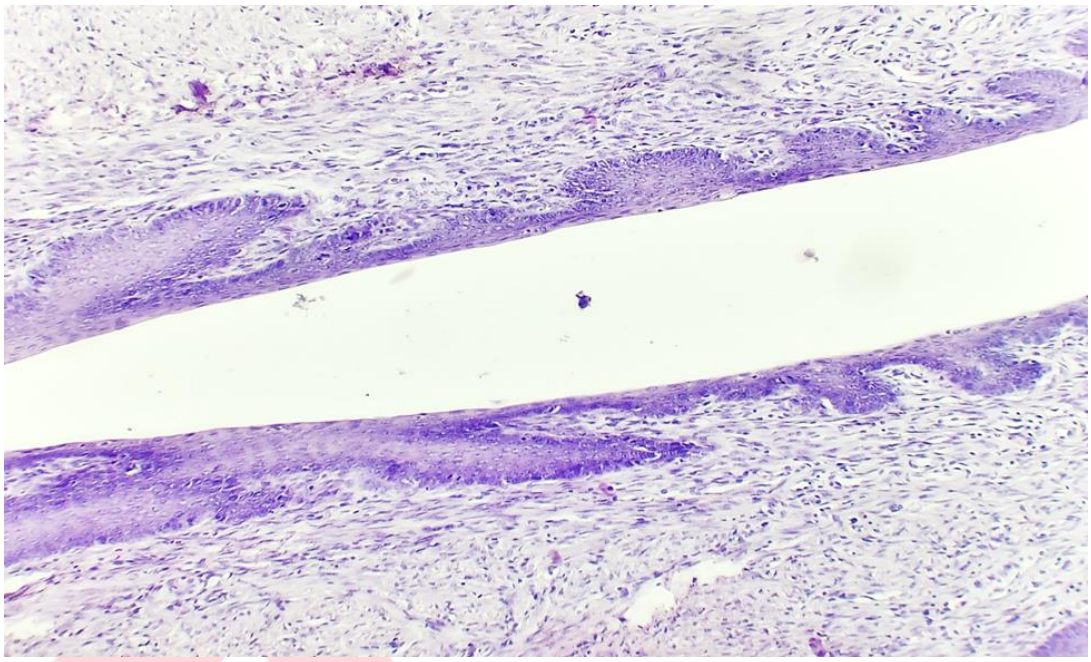
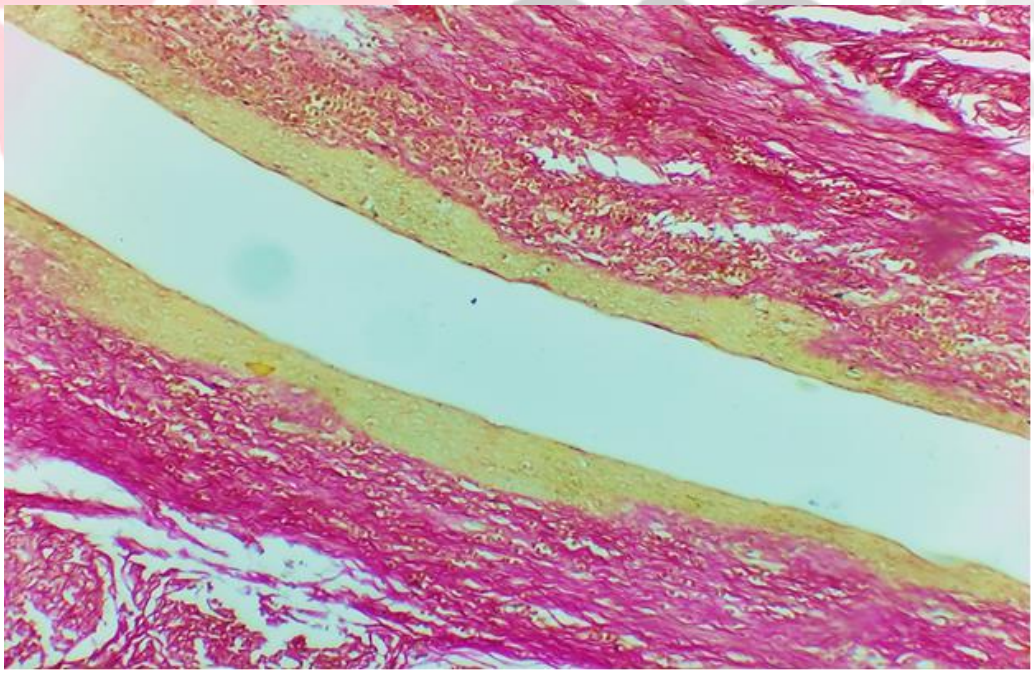


(fig. 3) the cervix and glands of a white broodless rat. Coloring: with Van Gison.



(fig. 4) the cervix and glands of a white broodless rat. Coloring: with Van Gison.

Thus, in the lower segment, a median border is formed that separates the uterus from the two body and cervical cavities, which are vaguely expressed. The middle border is made up of endometrium and

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myometrium. At the same time, myometrium has submucosal and single vascular layers in its structure. The vascular layer is more expressed in the body.

CONCLUSIONS

Histo-morphological studies conducted are considered important, and its results can be used in reference and educational literature and reproduction biology when writing evolutionary, functional, relative species morphology sections to write relevant sections. This may allow a comparative study of the structure of the female genitalia and the observation of their homology. In the development of various mammals, people, revealing their evolutionary dynamics, is of great importance. Thus, in rats, the cervix has more in common with humans, which reveals in advance what should be considered when looking for an experimental model when conducting research.

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