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DISTRIBUTION OF INNERVATION SOURCES IN THE GENITAL ORGANS IN RABBITS DURING THE PERIOD OF 2.0-4.0 MONTHS

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The scientific analysis presented in this study aimed to determine the structural elements of the nervous system, which are the basis of the innervation of the genital organs in rabbits in the stages of postnatal development. As a result of these researches, the sources and basic plexuses were examined, which are distributed in all the organs of the reproductive system in rabbits through the connecting branches.

However, conducting the study through fine anatomical dissection, it was determined that the sympathetic system, which provides the innervation of the reproductive organs, originates from the lumbar segment of the spinal cord. From this segment come the nerve branches that participate in the formation of the prevertebral ganglia in the lumbosacral complex. These in turn participate in the formation of the caudal mesenteric plexus which, in addition to the lumbar branches of the paravertebral ganglia, consists of a small, odd star-shaped mesenteric ganglion and 3-4 branches of the caudal mesenteric nerve.

Examining the development process of the caudal mesenteric plexus in different periods of postnatal development, it was found that gl. caudal mesentery shows essential development and demonstrates an absolute increase, towards the 4th month, in length of about 45.4% and width of 29.7%. The caudal mesenteric plexus which has an absolute increase in linear parameters, towards the 4th month of post-embryonic development, of about 26.0% at the level of the caudal pole emits the hypogastric trunk which contributes to the formation of the lumbar plexus and as a result to the innervation of the complex of positioned organs in the pelvic cavity.

At the base of the hypogastric trunk, close to the point of origin of the ovarian arteries, the ovarian ganglion is formed, from which to the aa. ovarian, the homonymous nerve branches are emitted. These rr. nerves at the level of the abdominal aorta form ovarian plexuses that are placed at the origin close to aa. right and left ovaries. In the process of postnatal development of the reproductive organs in rabbits, it was found that the ovarian plexus undergoes certain changes, which at the age of 2 months presents 3.18±0.07 mm in length and 0.83±0.04 mm in width and corresponding to the 4th month of growth, the length is 5.83±0.07 mm and the width 1.18±0.02 mm. These changes demonstrated a growth enhancement of 45.4% in length and 29.6% in width towards the 4th month of postnatal development of the animal body.

In conclusion, we can mention that the changes in the linear parameters of the main innervation segments of the reproductive system in rabbits confirm that towards the 4th month of development the nervous system acquires the necessary structures, which will ensure the efficient innervation of all segments of the reproductive system in rabbits.

Keywords: ganglion, hypogastric trunk, nerve plexus, rabbits.